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ESTABLISHED

CHLOROM

COMBATS MOST CLINICALLY IMPORTANT PATHOGENS

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ARIZONA MEDICINE
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Original Articles

CRYPTIC CERVICAL NODAL METASTASES: A PATHOLOGIC STUDY OF POSSIBLE PRIMARY SOURCES*

By Morton S. Comess, M.D., Fellow in Surgery, Mayo Foundation**
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THE PRIMARY source of carcinoma spreading to cervical lymph nodes and presenting as a mass in the neck usually is a lesion which is either obvious or readily discovered. In a small proportion of patients, however, the source is found only after searching examination and the passage of time; in others, it eludes detection altogether. It has seemed worth while to consider in detail the pathologic aspects of these lesions. Accordingly, the files of the Mayo Clinic were searched for records of those patients in whom histologic proof of metastatic involvement of cervical nodes was available, and in whom a primary tumor could not be located. The purpose of this study is threefold: (1) to delineate the pathology of lesions spreading to distant sites while the primary lesion remains inconspicuous, (2) to investigate the possibility of some epithelial tumors being primary in the soft tissues of the neck, and (3) to evaluate the role of pathologic examination in the management of cervical metastases.

MATERIAL

The records of patients seen at the Mayo Clinic from 1945 through 1953 which bore the diagnosis of metastatic carcinoma of cervical lymph nodes were reviewed. A total of 1,189 case records were studied. Of this number, 103 (8.7 per cent) were considered to have fulfilled the following criteria: (1) no history of treatment of any malignant or indeterminate lesion, (2) no history of symptoms related to a specific organ or system, (3) no clinical evidence of a primary tumor, proved or not, and (4) the presence of a histologically proved metastasis in a cervical lymph node.

This group of patients was intensively studied by means of the available records, and by correspondence with the patient, his family, local physicians, hospitals and other institutions. Pathologic material, consisting of gross specimens, blocks and slides, was available for study, as were the protocols in each instance when necropsy was done. The histologic material was reviewed, and new sections were prepared as indicated and, in the light of subsequent data, were re-evaluated.

RESULTS

It was possible to follow 100 (97 per cent) of the cases accepted; three (3 per cent) could not be traced. These 100 cases are considered in three categories: *Determinate:* A primary tumor was discovered at some time subsequent to the original examination; *Indeterminate:* The patient died without evidence of the source of the metastasis; *Surviving:* The patient was living at the date of study without evidence

*Abridgment of a portion of the thesis submitted by Dr. Comess to the Faculty of the Graduate School of the University of Minnesota in partial fulfillment of the requirements for the degree of Master of Science in Surgery.

**The Mayo Foundation, Rochester, Minnesota, is a part of the Graduate School of the University of Minnesota.

of malignant disease.

A. Determinate Group (40 Patients). — The pathologic type and grade of the neoplasms found in this group are presented in Table 1. There were 17 adenocarcinomas, 12 of which were of low grade histologically and five of which were anaplastic. The well-differentiated lesions included 10 thyroidal carcinomas, easily recognized in nodes at least by the papillary architecture with abortive colloid-containing acini. The primary tumors were clinically impalpable, ranging from 3 mm. to 3 cm. in greatest diameter; only two lesions exceeding 1 cm. were included. The smaller lesions may escape detection by the pathologist as well as by the surgeon.

Case 1. A 47-year-old woman was known to have had a nodular goiter for at least 10 years. There had been no recent change, but excision was advised. At operation, bilateral subtotal resection was done. A nodule, considered to be a bosselation of the posterolateral remnant on the left, was not removed. The pathologic diagnosis was multiple degenerating fetal and colloid adenomas. At the time of dismissal one week later, the nodule proved to be unsightly and was excised while the patient was under local anesthesia. Histologic examination disclosed papillary and follicular adenocarcinoma, grade 1, in a lymph node (Fig. 1a). No other nodes were involved. The original specimen was re-examined; in the left lobe, a histologically similar lesion, 5 mm. in diameter, was found (Fig. 1b). At last report 1½ years later, the patient was well.

The remaining two well-differentiated adenocarcinomas were typical adenocystic carcinomas, the so-called cylindroma. In one case, tumor was demonstrated in a maxillary sinus 6 months after metastasis to an upper deep jugular node; in the other case, the primary cylindroma was demonstrated in the floor of the mouth 16 months after biopsy.

Case 2. — A 61-year-old woman stated that a lump at the angle of the left jaw had been gradually enlarging for several months. Examination was unrevealing except for a firm mass, measuring 2 by 2 by 3 cm., in that area. Excisional biopsy revealed cylindroma replacing a node of the upper deep jugular chain (Fig. 2a). Three months later, suprahyoid dissection was performed on the left side. Sixteen months later, a cystic mass, 1 cm. in diameter, was noted in the floor of the mouth medial to the ascending ramus of the mandible. This was excised; it was histologically similar to the original lesion (Fig. 2b). Radical resection removing the hemimandible was done. Local recurrence and pulmonary metastases have been noted during the succeeding 3½ years.

Five lesions proved to be anaplastic adenocarcinomas. The primary tumor, an area of spindle cell carcinoma in a predominantly papillary carcinoma of the thyroid, was discovered at operation in one patient, at necropsy in the lung, stomach and prostate in three others, and at follow-up examination in the breast of the fifth patient.

Case 3. A 54-year-old woman noted a lump in the left side of the neck, which had been present

TABLE 1
Histopathology of Tumors of Determinate Source

Type	Grade 1	2	3	4	Total
Adenocarcinoma	10	2	0	5	17
Squamous cell carcinoma	0	1	3	12	16
Undifferentiated neoplasm	0	0	0	7	7
Total	10	3	3	24	40

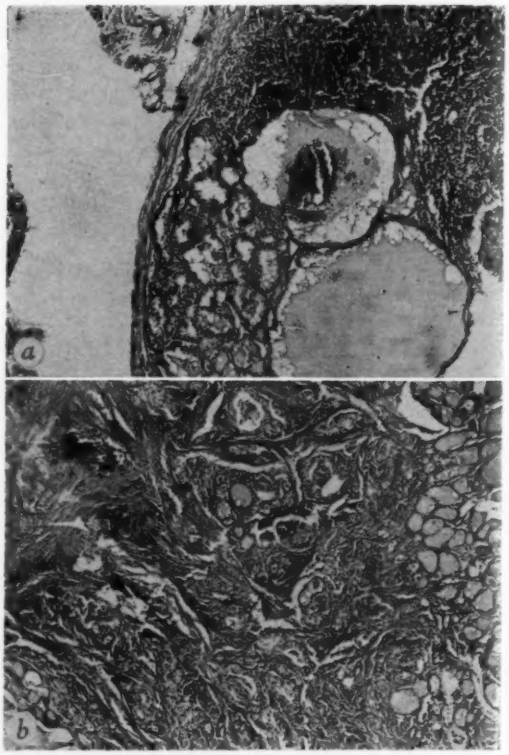

Fig. 1 (case 1). a. Left middle deep jugular lymph node. Follicular and papillary adenocarcinoma containing colloid, replacing lymphoid tissue (x75). b. Left lobe of thyroid. The previously resected lobe was found to contain a focus, 5 mm. in diameter, of adenocarcinoma, grade 1. Note normal thyroid parenchyma at upper and lower portions of the field (x50).

for 6 months. Examination was unrevealing except for a firm node, 2 cm. in diameter, in the left posterior cervical triangle. This was excised and was reported as scirrhous adenocarcinoma, grade 4 (Fig. 3). Radiation therapy was administered to the left side of the neck. Two months later, physical examination was negative. Eight months later, two more cervical nodes were palpable and a nodule, 1.5 cm. in diameter, was present in the lateral portion of the left breast. Excisional biopsy of the latter lesion disclosed a similar pathologic picture, and radical mastectomy was performed. Many axillary nodes were involved. The patient died 18 months later.

Of the 16 identifiable squamous cell carcinomas the source of which later became apparent, only one was well differentiated.

Case 4. — A physician's wife, 52 years old, gave a history of tuberculous laryngitis of 23 years' duration, and a mass in the right side of the neck of 3 weeks' duration. General examination was unrevealing, and indirect laryngoscopy showed only scarring and distortion of the larynx. The mass was excised and proved to be a node of the middle portion of the deep jugular chain containing squamous cell carcinoma, grade 2 (Fig. 4a). Two days later, the patient underwent direct laryngoscopy, which again showed only scarring; direct smears contained malignant cells. A tracheal stoma was made, a mirror was introduced and the larynx was examined from below; no tumor was seen. Blind biopsies contained malignant foci, and laryngectomy was performed. Tumor was found invading scar tissue and displacing it medially (Fig. 4b). Radon seeds were implanted into the area of metastatic spread. The patient is alive and well 6½ years later.

Four anaplastic squamous cell carcinomas carried in association with the epithelial element the peculiar and constant lymphoid stroma characterizing the so-called lympho-epithelioma. In other lesions there were scattered islands of lymphoid tissue too inconstant to warrant this designation. The primary tumor was located in the nasopharynx in each, becoming apparent 2, 5, 24 and 30 months subsequent to original investigations occasioned by metastatic masses present from 3 to 6 months. An ulcerating or nodular mass in the vault or lateral wall of the nasopharynx was noted in each.

TABLE 2
Histopathology of Tumors of Indeterminate Source

Type	Grade				Total
	1	2	3	4	
Adenocarcinoma	0	2	5	17	24
Squamous cell carcinoma	0	2	5	4	11
Undifferentiated neoplasm	0	0	0	8	8
Melano-epithelioma	0	0	0	1	1
Total	0	4	10	30	44

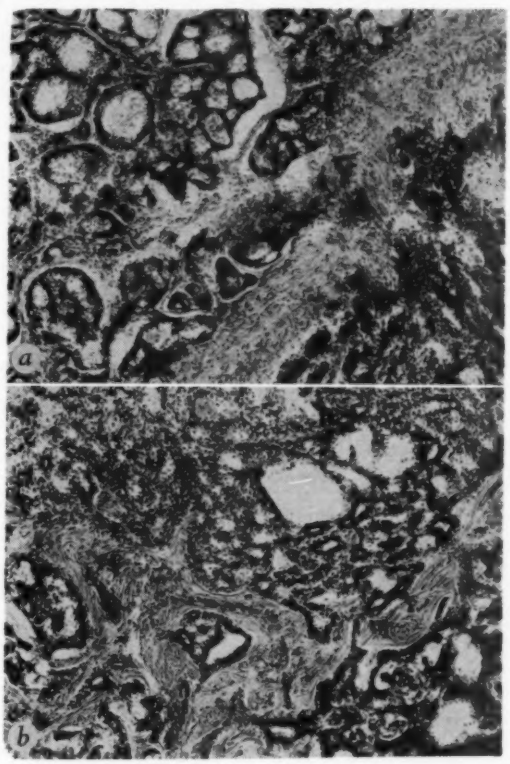

Fig. 2 (case 2). a. Left upper deep jugular lymph node. Adenocarcinoma, grade 1, cylindromatous type. Note cords and cylinders of densely staining small cells invading the lymphoid stroma (x100). b. Left side of floor of mouth, 16 months later. A cystic lesion, 1 cm. in diameter, was excised with the mandible and cervical lymphatics in continuity. Note the identical histologic appearance with a (x100).

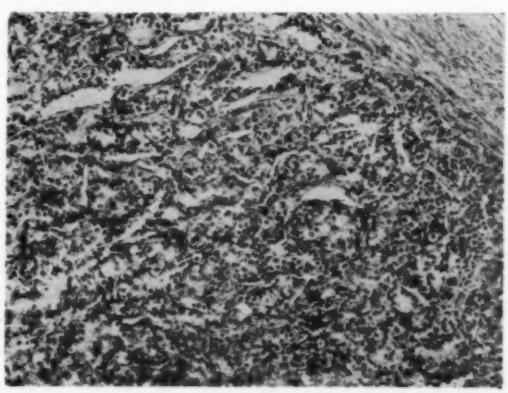

Fig. 3 (case 3). Left upper posterior jugular lymph node. Adenocarcinoma, grade 4, with scirrhous reaction. A histologically identical lesion, 1.5 cm. in diameter, was excised from the left breast 8 months later (x100).

Case 5. – A 68-year-old man had noted a mass in the right anterior aspect of the neck 19 months prior to coming to the clinic. Aspiration biopsy had been done; it had been stated to show cancer cells. Two months later, a block dissection had been carried out. One year later, and 5 months prior to the present admission, a mass had appeared in the left posterior aspect of the neck. Examination at the clinic was unrevealing except for a mass, measuring 2 by 3 cm., in the left posterior cervical triangle. Excisional biopsy disclosed metastatic lymphoepithelioma in a lymph node of the subparotid region (Fig. 5). Radiation was directed to the left side of the neck and nasopharynx. Five months later, the patient noted some "stuffiness" of the nose. A mass, 2 cm. in diameter, was noted in the left posterior nasopharynx, to which was directed further radiation therapy. Nineteen months later, a nodular mass was noted in roentgenograms of the left side of the chest; the nasopharynx appeared normal.

Of metastases of 11 occult anaplastic squamous cell carcinomas, the primary tumor was discovered in the nasopharynx in three further instances, in the faucial tonsil in three cases, in the tongue in two cases, and in the middle ear, esophagus, and urinary bladder in one instance each. The nasopharyngeal lesions appeared 4, 7 and 30 months later. The tonsillar carcinomas became apparent 1½, 6 and 16 months after the initial examination, presenting as a discrete lesion in or on the tonsil.

Case 6. A 46-year-old man had been aware of a nontender lump in the right side of the neck for 5 months. It had been excised and the patient had been told that it was a "lymphoma." Two months later, the patient came to the clinic, where studies were inconclusive. The sections were reviewed and felt to be carcinoma, probably squamous, grade 4 (Fig. 6a). He was given a course of radiation to the right side of the neck and nasopharynx, and was advised to return in 6 weeks. At that time, the results of examination were normal except for an "innocuous" tag on the right tonsil. This was biopsied for the sake of completeness, and found to contain histologically similar tumor (Fig. 6b). Radiation was administered to the tonsillar fossa; 4½ years later, the patient was in good health.

Infiltrating masses were noted on the base of the tongue in two cases, both about two years after the initial investigation. Anaplastic squamous cell carcinoma extensively involved the external auditory meatus and middle ear 16 months after investigation of a similar lesion in a node of the upper deep jugular chain, and after four intervening examinations. A carcinoma of the cervical segment of the esophagus was discovered at necropsy 19 months after investigation of a lump in the neck shown to be squamous cell carcinoma, grade 3, in a middle deep jugular node. Roentgenologic examinations of the esophagus at that time and three months later were normal. The final lesion of this group apparently arose in the urinary bladder.

With increasing anaplasia and loss of structural and cytologic differentiation, the microscopic picture becomes more and more difficult to categorize, until even epithelial origin cannot be recognized. Four lesions were recognizable as probably carcinomatous; whether of glandular type or not could not be determined. In one such instance, surgical exploration revealed direct extension to the involved upper deep jugular nodes from a lesion in a tonsillar crypt. In another, a "suspicious nodule" was noted in the tonsil 7 months after the fruitless investigation for the source of a metastasis in the upper posterior cervical triangle. Permission to biopsy this lesion was denied because "it could do the patient no good." Primary tumors were discovered in a lung after a latent period of 52 months, and at necropsy primary tumors were found in the stomach 19 months after investigation.

In three other cases, no hint as to the tissue of origin was apparent in the sheets of pleomorphic primitive cells. Postmortem examinations disclosed a carcinoma in the pancreas 21 months after appearance of a cervical metastasis, reticulum cell sarcoma primary in the mediastinum and presenting in the left lower deep jugular chain, and lymphosarcoma 46 months after biopsy of a node in the lower deep jugular chain.

B. Indeterminate Group (44 Patients). – The histopathology of metastatic tumors the source of which did not become apparent during the life of the patients is presented in Table 2. The great preponderance of adenocarcinomatous and highly anaplastic tumors is apparent. The metastatic lesions were in lower groups of the

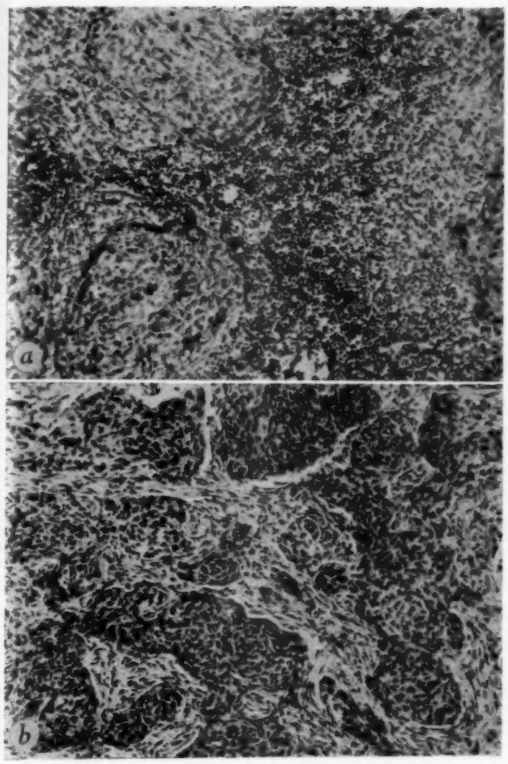

Fig. 4 (case 4). a. Right middle deep jugular lymph node. Note nests and whorls of fairly well-differentiated neoplastic squamous cells (x150) b. Section from the larynx. Squamous cell carcinoma, grade 2, infiltrating scar tissue (x150).

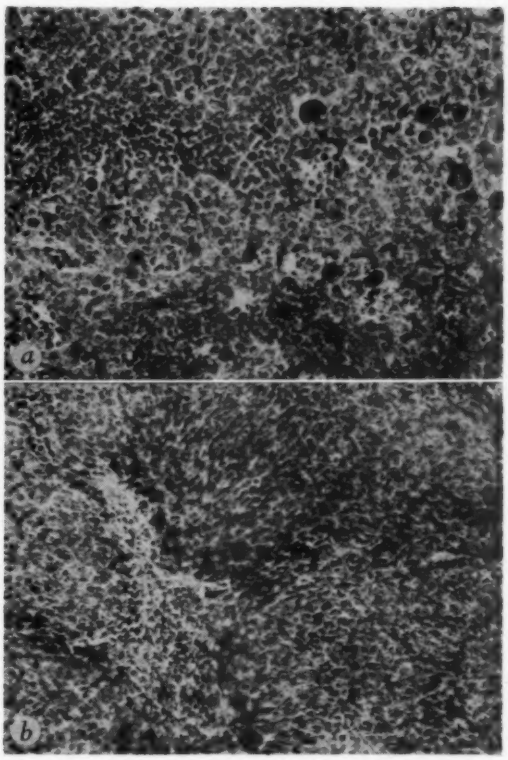

Fig. 6 (case 6). a. Right upper deep jugular lymph node. High-grade squamous cell carcinoma, without pearl or epithelioid formation, and with marked variation in size, bizarre nuclei and giant forms (x200). b. Right tonsil, 6 weeks later. Biopsy of an apparently innocuous tag disclosed squamous cell carcinoma, grade 4 (x200).

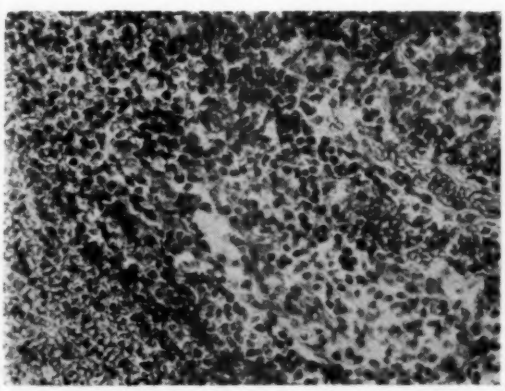

Fig. 5 (case 5). Left upper posterior jugular lymph node. Squamous cell carcinoma, grade 4, lympho-epitheliomatous type. Note large, pale, amorphous, epithelioid cells scattered in the lymphoid stroma. A similar lesion was found in the left posterolateral vault of the nasopharynx 5 months later (x350).

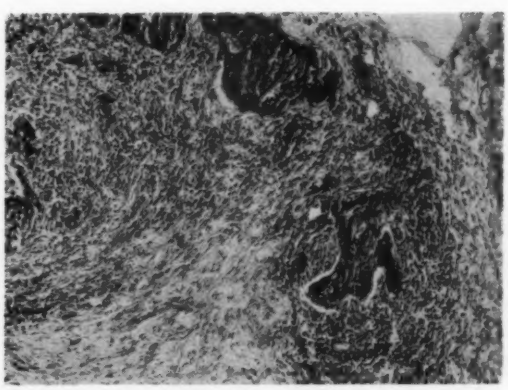

Fig. 7 (case 7). Left lower deep jugular lymph node. Carcinoma, grade 4, type indeterminate, with amorphous clusters of small, uniform, dark, spindle-shaped cells. No source for this lesion was found at necropsy (x100).

cervical lymphatic chains, that is, lower deep jugular, transverse cervical, spinal accessory or "supraclavicular," in 35 (80 per cent of the group). In only four instances were metastatic lesions in these lower groups of squamous epithelial origin. Twenty-two patients (50 per cent) were obviously ill, with a history of loss of weight, weakness, vague pain, anorexia and other constitutional symptoms. Often, particularly in the latter group, the diagnostic effort was not great and procedures which might have been able to delineate the primary tumor were not performed. Forty-one patients (93 per cent) died within 3 years of their initial visit, two patients were living at the time of study with terminal disease, and one patient died during the process of investigation. The latter case was one of the two cases in the group in which necropsy was performed.

Case 7. — A 67-year-old man consulted his local physician because he had noted a mass in the anterior cervical triangle several months previously. The lesion was excised, and the patient was told that it was cancer. The patient elected to come to the clinic for further investigation. Several hours prior to his scheduled examination, he was found dead in his lodgings. Sections of the cervical tumor were reviewed and disclosed undifferentiated malignant neoplasm (Fig. 7). Necropsy revealed only the recent surgical scar, advanced systemic and coronary arteriosclerosis, and incidental findings. Examination of the viscera and of the upper respiratory and digestive tracts in situ revealed no evidence of a primary growth.

A lesion which was undifferentiated on the original pathologic investigation proved, at necropsy one year later, to be malignant melanoma, the primary site of which was not discovered despite most careful search. In another instance, a node excised from the middle deep jugular chain was found to contain metastatic melanoepithelioma on pathologic examination. Despite careful search, the primary site was not discovered, and necropsy was not permitted when the patient died 10 months later.

C. Surviving Group (16 Patients). — Patients who did not manifest evidence of a primary malignant tumor during the follow-up period had, with one exception, metastases of squamous cell carcinoma in upper cervical lymphatic chains. The composition of the group is, of course, determined in part by the intensiveness and number of examinations, the duration of the follow-up period, and the therapy directed to the disease process. Patients were studied 15 months to 10½ years (4½ years' average) after the initial admission. One patient is included although he had died from unrelated disease 4½ years after first being seen; in another, there was question of recurrence in the biopsy site three years later. Fourteen patients have remained well. In only one instance was the lesion shown to be adenocarcinomatous (Table 3).

Case 8. — A 73-year-old man stated that for three months he had been anorectic, with loss of weight and some nausea. Two months earlier, he had noted a lump in the left side of the neck which "came and went." On examination, several nodes, 1 cm. in diameter, were noted in each posterior cervical triangle, and a firm area was noted in the right lobe of the prostate gland. Urologic consultants stated that the area was not neoplastic. Routine studies of the blood and urine, serum phosphatase, and roentgenograms of the chest, stomach, colon, gallbladder and pelvis were normal, as was the excretory urogram. A node was excised from the left posterior cervical triangle and was shown to contain metastatic adenocarcinoma, grade 2 (Fig. 8). Empirically, the patient was given stilbestrol, 5 mg. daily. On examination 15 and 32 months later, the nodule in the prostate was unchanged, and other findings remained normal.

Probably this patient had a carcinoma of the prostate, but in the absence of other evidence and considering the frequency of benign nodules in his age group, this cannot be assumed.

The remaining patients all proved to have lesions recognizable as squamous cell carcinoma on study, present 1 to 24 (average 7½) months. These lesions were located in the nodes of the middle portion of the deep jugular chain in one case, in the upper portion in 10 cases, in the submaxillary chain in three cases, and one patient had lesions in both the submaxillary and upper deep jugular chains. The histopathologic classification is presented in Table 3. Three lesions classed as squamous cell carcinoma, grade 4, were categorized as lympho-epithelioma; two were located in the deep jugular chain, and one in the submaxillary group of nodes. The therapy given to these patients varied. Block dissection was performed in six instances, supplemented by radiation in four. Eight patients were given radiation therapy in

varying dosage and technic. One patient received essentially no treatment.

Case 9. — A 62-year-old man stated that he had diabetes of 13 years' duration, and that he had noted a mass in the right upper aspect of the neck three months earlier. Physical examination disclosed nothing unusual except a hard mass, 6 by 5 cm. in size, in relation to the angle of the right mandible. This was excised at biopsy and was shown to contain squamous cell carcinoma, grade 3 (Fig. 9). Further study of the oral cavity, sinuses and chest was unrevealing, and the patient was dismissed to his local physician for continuing study. Six and a half years later, the patient reported that he had had no subsequent treatment, that he felt quite well, and that periodic examination had disclosed nothing abnormal.

COMMENT

The presumptive diagnosis of cervical metastatic tumor is based on the palpation of a hard, nontender, ovoid and asymmetric mass in the appropriate area of the neck. Clinical fallibility is well known, and the examiner's impression must be regarded as an informed guess until proved histologically or by the progression of the disease. Space does not permit discussion of the clinical differential diagnosis of cervical tumors for which excellent sources are available(1-3). It is worthy of mention that the presumption of "occult source" cannot justifiably be made without careful evaluation and that most often a primary lesion is obscure because of failure to look for it rather than by virtue of its anatomic and pathologic peculiarities. If careful history, minute physical examination and appropriate endoscopic, roentgenologic and hematologic studies are unavailing, the source for the presumed metastasis may be considered occult. This situation occurs in from 3 to 8 per cent of reported series(4-6).

In the absence of reasonable explanation of the presenting cervical mass, surgical exploration and accurate tissue diagnosis are necessary in formulating a program of investigation or management. Mayo and Lee(7) have discussed the indications for biopsy of cervical lymph nodes at the clinic. Biopsy is not to be undertaken lightly; it is said that it is not likely to point to the source of the metastatic lesion and the procedure may well compromise future definitive surgical treatment(6). We have felt that establishment of the true nature of the lesion is of paramount importance. The microscopic examination decides the issue of the primary versus the metastatic nature of the lesion and often suggests the response that may be expected from radiotherapy.

To biopsy we personally prefer adequate surgical exposure, which allows selection of tissue most likely to contain metastatic deposits and some certainty that a negative pathologic report in truth means that no metastasis is present. If fresh frozen sections are made(8) the surgeon may continue at the time with any surgical procedure deemed indicated on the basis of

TABLE 3
Histopathology of Tumors of Surviving Group

Type	Grade 1	2	3	4	Total
Adenocarcinoma	0	1	0	0	1
Squamous cell carcinoma	0	3	6	6	15
Total	0	4	6	6	16

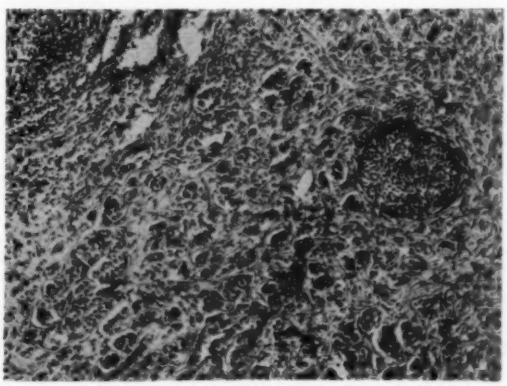

Fig. 8 (case 8). Left middle deep jugular lymph node. Adenocarcinoma, grade 2. Note small cells with darkly staining basal nuclei lining abortive acini and glands (x100).

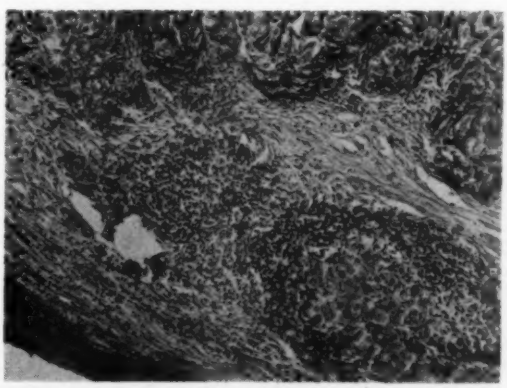

Fig. 9 (case 9). Right upper deep jugular lymph node. Squamous cell carcinoma, grade 3. Note clusters and rests of anaplastic squamous cells. The patient had no treatment and is living and well 6½ years later (x100).

the pathologic findings. Anesthesia, operating facilities, draping and incision should be planned so that definitive operation may be undertaken at the best time, that is, the first time the neck is entered.

What may be expected from the pathologic investigation of a presumed nodal metastasis in the absence of a detectable primary lesion? First, the true anatomic location of the secondary tumor becomes evident. With rare exceptions, the initial metastasis from a carcinoma of organs of the head and neck is to the regional chain of nodes, and capricious metastases are uncommon. However, the tonsil, posterior lingular region, posterior portion of the floor of the mouth, nasopharynx, hypopharynx and epiglottis drain primarily to nodes ("tonsillar," "subdigastric") of the upper portion of the deep jugular chain, and when this common channel is involved, these sites cannot be differentiated. Likewise, lymphatic emboli from any organ draining into the right lymphatic or thoracic ducts may initially appear in the lower deep jugular chain(9). Metastases in other chains indicate probable sources in the appropriate drainage tracts. The anatomic situation of the secondary lesion, considered with the histopathologic picture, serves to direct the attention of the patient and the physician especially to the suspected area during the indefinite follow-up period.

Second, a positive histologic diagnosis is made. The possibility for serious error is great, considering the numerous structures and pathologic aberrations thereof in the neck.

Third, more accurate prognosis and effective treatment are made possible. Our data show that of patients with adenocarcinomatous lesions low in the neck, all were dead or had terminal disease within three years. With metastases of low-grade tumors, the primary lesion often became evident and remained amenable to treatment with the passage of time. With high-grade squamous cell carcinoma involving nodes in the upper deep jugular group, prognosis was variable, with the later appearance of extensive disease responding to radiation therapy often noted. Metastatic lympho-epithelioma found in the area almost always signifies a latent primary tumor in the nasopharynx; such tumors are characteristically radiosensitive. Thyroidal carcinoma metastatic in nodes of the middle portion of the deep cervical chain almost always signifies a small primary tumor in the homologous lobe(10). With adequate surgical resection, the prognosis is excellent. Metastatic melanoma and cylindroma imply limited likelihood of lengthy survival.

Fourth, with squamous cell carcinomatous masses in the upper part of the neck, the possibility of long-time survival without the appearance of a primary tumor and without definitive treatment should be considered.

The nature of the latter group of lesions is obscure, although the phenomenon is well known. Ewing(11) stated that, after all other possibilities have been ruled out, a group of tumors exists some of which may be derived from branchial epidothelial rests. Carp and Stout(12), McWhorter(13), Oliver(14), Crile and Kearns(15), Hudson(16), and Cleland and Hanson(17) have published data on series of such cases; the evidence presented for branchial origin is tenuous and unreliable in most. Martin, Morfit and Erlich(18) decried the not infrequent application of this term to metastases of more or less obvious primary tumors, but they cited eight cases as fulfilling a set of criteria for possible branchiogenous origin. Only rarely can such an event be demonstrated pathologically, and three apparently bona fide cases are on record(19-21). The more frequent location of these lesions in our material in the submaxillary chain speaks against origin from the branchial apparatus, remnants of which are found almost exclusively in the anterior triangle deep to the sternocleidomastoid muscle. Origin in remnants of the salivary ducts, the thyroglossal duct, or in misplaced epithelial rests has been hypothesized; however, evidence is lacking to support these suggestions. Long survival of such patients after a variety of more or less effective programs of treatment and without evidence of a primary tumor speaks either for inclusion of the total extent of the disease in the treated field, or for arrest or regression of the primary tumor in some poorly understood manner. That unpredictable variability(22) and occasional "spontaneous" cures(23) occur in the course of malignant disease is a matter of record which should temper any prediction made by the physician.

SUMMARY

1. In a study of 1,189 patients with proved metastases to cervical lymph nodes, a source could not be found in 103 (8.7 per cent) at the initial investigation. A primary tumor was discovered later in 40 patients, 16 patients had no further evidence of malignant disease, and 44 patients died without evidence of the source of the secondary tumors.

2. Surgical exposure and histologic diagnosis are considered essential in the management of a cervical tumor the nature of which is indeterminate after clinical study.

3. Fresh frozen sections are of decided help when, as is frequently the case, a definitive diagnosis can be made immediately by this method. Indicated operative procedures may be immediately performed.

4. The histopathologic findings were often of help in locating a cryptic primary tumor, particularly one in the thyroid gland. The histologic type and grade of the secondary lesion determine in large part the prognosis and management of the individual case.

5. Metastases of high-grade squamous cell carcinoma in the submaxillary and upper deep jugular chains were found to imply unexpectedly favorable prognosis. Long-term survival without further evidence of neoplastic disease after varying treatment was noted in about one third of such lesions. No adequate explanation of the source of these tumors is available.

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ACUTE APPENDICITIS

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IN 1886 appendicitis got its name from Reginald Heber Fitz of Harvard; this description is considered one of the classics of medical literature. It is odd, however, that the condition was not discovered or described in the literature until such a late date. Anatomically the appendix was described in the sixteenth century; pathologically it was recognized in the eighteenth century; clinically it belongs to the nineteenth century; and therapeutically it is the challenge of the twentieth century.

In discussing inflammation and infection the late Richard Jaffe stated: "There is no infection without stasis." Thus, if a gallbladder can empty itself there will be no cholecystitis, if a sinus drains itself there will be no sinusitis, and if an appendix evacuates itself there will be no appendicitis.

Micro-organisms always are present, but as long as they are kept in motion they cannot increase in number and so do not gain a foothold in the tissues; thus no inflammatory response results. Fecaliths, kinks, bands, spasms, mucosal folds, or foreign bodies might act as the obstructing factor and permit the bacteria to multiply. How far this inflammatory response will progress cannot be foretold. It depends upon the completeness of the obstruction, the virulence of the micro-organism and the resistance for the host.

HISTORY AND SYMPTOMS

Certain types of people are predisposed to certain types of diseases. We know that the characteristic type for acute appendicitis is the *Young Adult Male* in his teens and second or third decades. There is no dogma in medicine, and although this disease may occur at any age, from the uterus to the grave, it becomes infrequent after the age of 40.

Any diffuse epigastric distress which localizes to the right lower quadrant within the first 24 to 48 hours is acute appendicitis until proved otherwise. Unfortunately, however, our patient does not use this terminology, but relates the same story in a different way. His terms for diffuse epigastric distress are: "belly-ache," "spoiled stomach," cramps," or "gas." His usual remark is: "Something I ate gave me a belly-ache." He oft-times heeds the advice of a well meaning friend who suggests a cathartic, and then some 24 hours later becomes concerned about a "sore spot" in the lower right side of his abdomen. It is at this time that he will usually consult the doctor.

The *Two Question Test* suggests the diagnosis in well over 70 per cent of cases of acute appendicitis. Question number one: "Where was your pain when it started?" To this the patient usually points to his entire abdomen. Question number two: "Where does it hurt you now?" To this interrogation the patient usually points to the region of McBurney's point. This is one of the simplest, most efficacious and rapid methods of diagnosing a case of acute appendicitis.

Unfortunately nausea and vomiting have been taught as being frequent symptoms. This is not true. The majority of patients neither vomit nor complain of nausea; almost all however have anorexia. Anorexia, nausea and vomiting are really three degrees of one symptom being dependent upon the degree of distention in the appendix. Vomiting is associated with a markedly distended appendix, and since almost all acute appendices are associated with microscopic distention these patients should complain of anorexia. It is indeed a rarity for them to find a patient suffering with acute appendicitis stating that he is hungry.

PHYSICAL EXAMINATION

An initial high fever is rarely found in acute appendicitis, therefore strongly suggests some other condition. The fever is usually of low grade in early appendicitis but as the disease progresses, especially after the first 24 to 48 hours, the fever begins to rise as the peritoneal cavity becomes soiled. One, therefore, should not wait for the fever to develop since it indicates a complication rather than acute appendicitis per se. This rule does not apply to children since they will develop a hyperpyrexia on the slightest provocation. The pulse is seldom of great diagnostic value. The so-called diagnostic ratio should be kept in mind, namely, that for

every degree rise in temperature there is a 10-beat increase in pulse. The respiratory rate is normal or often proportional to the fever; as peritoneal soiling progresses, it increases. The patient with an uncomplicated acute appendicitis usually does not appear to be seriously ill; in fact his appearance may be quite misleading as he walks into the doctor's office. Rarely have I just found these patients lying in bed with the right knee raised as is described so routinely in many textbooks.

The tremendous number of specific signs which have been associated with the diagnosis of this condition are not only exhaustive but exhausting; they have little or no practical value. To describe Bastedo's sign, Klemm's sign, Walkowitsch's sign, Reder's sign, Aaron's sign, Morris's sign and many others too numerous to mention is only a display of academic muscle. Only those few signs, or tests, which are of practical value will be evaluated.

McBurney's Point is the point of maximum tenderness as determined by the pressure of one finger. It is located in the following way: a line is drawn between the right anterior superior iliac spine and the umbilicus; this line is trisected. McBurney's point will be found where the lateral and middle thirds meet. A state of confusion seems to exist as to whether this point remains fixed regardless of the position of the appendix. Although it has been stated that the nerve endings of the eleventh and twelfth dorsal segments are reflexely irritated by an inflamed appendix, practical experience suggests that the true point of tenderness is dependent upon the position of the appendix and not the fixed nerves.

Increased tonus of the abdominal muscle, or so-called rectus rigidity, is not a sign of acute appendicitis, but rather a sign of peritonitis.

We know that it is quite impossible to contract one rectus muscle without contracting the other. Why then do we refer to the sign as *right* rectus rigidity when both recti contract? To correctly test for this sign the examiner must place both hands on the abdomen of the patient, one on each rectus muscle. With gentle pressure he determines whether or not one rectus is rigid and the other relaxed. If such a condition exists and the only one rectus muscle is found to be rigid, then this suggests a mass underlying the rigid rectus. Such masses in the case of acute appendicitis would be either a localizing inflammatory appendical mass made up of appendix, terminal ileum and omentum, or an appendical abscess. When both recti are rigid it denotes a muscular defense in response to an underlying peritonitis. Should such a rectus suddenly be released the patient will wince because of so-called rebound tenderness (Blumberg's sign).

The obturator internus sign locates an acutely inflamed appendix but does not diagnose it. It is performed by bending the knee and internally rotating the flexed thigh. This maneuver places the obturator internus muscle through its full range of movements and will cause hypogastric pain if an acutely inflammed appendix overlies its fascia. Pelvic inflammatory disease as well as an acute pelvic appendix can produce a positive obturator sign.

The *iliopsoas sign* is not a diagnostic sign for acute appendicitis, but rather one which locates an inflamed appendix lying retrocecally and involving the fascia which covers the psoas muscle. It is conducted in the following way: the patient is placed on his left side and the right thigh is fully extended. If pain over the appendical area is produced by this maneuver the test is considered positive.

Rovsing's sign is considered positive when pain over McBurney's point is produced by exerting pressure over the descending colon. Supposedly it is due to a retrograde inflation of the cecum when colonic gas is forced from left to right in the presence of an inflamed appendix.

No physical examination is considered complete without a rectal or so-called bidigital examination. The latter is done, whenever possible, by placing the index finger in the vagina and the middle finger in the rectum. This will readily identify the cervix or adnexal pathology, a bulging cul-de-sac of Douglas, or fecal masses. Thus, greater orientation is obtained than is possible with a rectal or bimanual examination.

The *laboratory data* is a helpful adjunct in the diagnosis of acute appendicitis; however, it does not replace a carefully taken history and a well conducted physical examination. The differential blood count is at times more helpful than the total blood count, however, both of these are done routinely. Urinalysis is also a necessary procedure but may be misleading. If the in-

flamed appendix is located near or on the bladder, the ureter or the kidney, a few red cells may appear in the urine thus masking the picture. On the other hand, a rather large ureteral calculus may plug the ureter so thoroughly that no pus or blood can pass into the bladder and again the clinician is misled. Of late we have utilized the flat roentgenogram of the abdomen in those cases where the diagnosis is somewhat uncertain. Much work has been published recently regarding the isolation of fecaliths in the appendix as shown on stereoscopic views. This is helpful both in the direct and the differential diagnosis and should be kept in mind.

DIFFERENTIAL DIAGNOSIS

Although many diseases have been confused with acute appendicitis, for practical purposes, one must be thoroughly conversant with the usual conditions which cause the greatest diagnostic difficulties. The vast number of our errors are found in the following five conditions: perforated peptic ulcer, acute gallbladder, renal colics, salpingitis and acute pancreatitis.

Perforated peptic ulcer is almost always found in males. A history is elicited of a sudden dramatic attack of pain which doubled the patient up, forcing him to stop whatever he happened to be doing. Abdominal auscultation usually reveals a silent abdomen, and the roentgen demonstration of a spontaneous pneumoperitoneum is quite diagnostic. Tenderness is quite diffuse, the abdomen is board-like, the patient looks more ill, and shock may be present. The pinpoint, perforation for the forme fruste ulcer will present a misleading picture.

Acute gallbladder disease is more common after the age of 40. The gallbladder patient is usually the fair, fat and 40 type of individual with a history of selective dyspepsia and/or a previous similar attack. The pain is usually above the umbilicus and the tenderness is localized to the right quadrant of the abdomen. At times Head's zones of hyperesthesia will reveal the hyperesthetic area above the umbilicus and to the right, whereas such an area is found below the umbilicus in acute appendicitis. The pain is much more severe in acute cholecystitis and the patient usually requires sedation (this is most unusual in acute appendicitis).

Renal colics may be caused by stones, uratic debris, microscopic thrombi or a dropped kidney with a Dietl's crisis. The pain is usually in the loin, radiates along the course of the ureter, and then into the inner aspect of the thigh or the genitalia. A bradycardia is very characteristic of renal or ureteral colic. Tenderness over the kidney area is usually present. Red blood cells in the urine are most suggestive. In cases where great doubt exists emergency intravenous pyelography may provide the final answer.

Salpingitis usually occurs immediately before, during or after the menstrual period. It is extremely rare after the menopause. Tenderness is usually bilateral and over the region of the symphysis; on bimanual examination the tender tube may be felt; tenderness can be produced by moving the cervix. A positive cervical or urethral smear is pathognomonic.

Acute pancreatitis may be either the mild edematous type or the fulminating hemorrhagic type. The pain can be diffuse or it may be located in the back; in the latter case it is usually relieved by sitting up or lying prone. Shock is present early and the pain is extreme. A high blood amylase test corrobrates the diagnosis.

TREATMENT

Modern advances in chemotherapy have somewhat altered the treatment of acute appendicitis. Regardless of this fact, however, two schools of thought still exist. One group is of the opinion that acute appendicitis is a surgical condition whenever and wherever seen; the other group advocates conservative therapy in the so-called late or neglected cases of acute appendicitis. A practical middle of the road type of therapy can be applied which incorporates some of the tenets of both groups. It is always preferable to remove the leaking focus from the peritoneal cavity, however, there are times and situations when this cannot be accomplished.

A neglected so-called "3 or 4 day appendix" may be associated with a diffuse peritonitis or an early well defined appendical mass. In these two instances the mortality can be lowered if conservative therapy is instituted. Formerly, conservative therapy meant the Ochsner-Sherron regime, namely, Fowler's position, little or nothing by mouth, heat or cold to the right lower quadrant, and sedation. Today, however, chemotherapy plays a major role; most cases receive penicillin for its effect upon the streptococci and staphylococci, and streptomycin which affects

the gram negative rods. The sulfonamides, aureomycin and chloromycetin also have their advocates. Fowler's position has been discontinued in many clinics; I prefer to let the patient lie in any position in which he is most comfortable. The use of heat or cold over the right lower quadrant is purely a personal problem; either may be used since they act as counterirritants which relieve pain, rather than having a direct bearing upon the appendical pathology per se. In the presence of gastric or small bowel distention gastric siphonage or intestinal intubation is indicated. Protein, carbohydrates, electrolyte, water and vitamin balance must be maintained. Plasma and blood are indicated at times. Sedation is necessary, however, full doses of morphine may mask the picture, hence, I prefer sedatives of a milder nature.

Under such a regime the neglected case of acute appendicitis will do one of three things: (1) it will get better, (2) it will get worse, and (3) it will form an abscess. There are many ways of determining whether a patient is getting better or worse, since changes in pain, distention, temperature, vomiting and abdominal sounds are all of diagnostic value. However, the one outstanding prognosticator is the pulse. A rule that I have followed and one which has served us well is the following: if the pulse increases 20 beats within an hour and continues to rise, surgical intervention is indicated. This should not be confused with a rapid pulse, in which case conservative therapy is still continued. The pulse is a more sensitive and more accurate indicator than all of the other signs.

If the condition should subside and the patient's condition improve, surgical intervention is delayed for 6 to 8 weeks. To attempt to do an appendectomy 8 to 10 days following a fulminating inflammatory process is to encourage wound infection, herniation, adhesions, fecal fistulae and intestinal obstruction. On the other hand, I feel that it takes approximately 6 weeks for the average inflammatory edema to disappear. If one waits during this interval and then has the patient return for an interval appendectomy the surgery is simple technically, and the postoperative course is usually uneventful. That the patient might have another attack within this waiting interval is possible but most improbable.

If, under conservative treatment, the patient gets worse, the surgeon is forced to operate; these are the cases which are associated with a high mortality. Surgical intervention is considered in the hope that the leaking appendix may be removed. However, these late neglected appendices are usually necrotic and oft-times cannot be removed: if removal is possible it may have to be done by morselation. The question as to whether drainage is correct or incorrect in such a case is still controversial. I lean toward the school of thought which believes that the peritoneal cavity is only a potential cavity, and therefore cannot be drained. It has been my custom therefore to close these abdomens without drainage.

The third possibility under conservative treatment for the neglected appendicitis is the formation of an appendical abscess. This is suspected when the patients present a spiking type of fever, chills, sweats and a leukocyte count over 20,000. Should such an abscess form it may get better or it may get worse. If resorbtion takes place and the inflammatory mass diminishes in size the patient's condition will improve and the mass will disappear. Such a patient is permitted to leave the hospital and is advised to return in 6 to 8 weeks for an interval appendectomy. If, however, the mass enlarges and the patient's condition gets worse the abscess is incised and drained. If the appendix is found in the abscess cavity (this is most unusual) it is removed; if it is not found, an interval appendectomy is performed 6 to 8 weeks after drainage of the appendical abscess. Autoappendectomies have been reported, but these too are quite infrequent.

This plan does not apply to children suffering with acute appendicitis, since it has been shown that children do not have the ability to localize acute appendical lesions. Therefore, in children, the rule must be followed that the case is a surgical one regardless of the time element.

PRACTICAL ASPECTS OF APPENDECTOMY

The choice of the incision, whether a McBurney or a rectus, will be determined by the type of case and the surgeon's preference.

At times it might be difficult to locate the appendix. However, by following two simple maneuvers the vast majority of appendices can be found readily. The cecum is picked up in a moist laparotomy sponge and gently pulled

upward toward the anesthetist. The terminal ileal fat pad (a neglected bit of anatomy which is an excellent surgical guide) is grasped with a Babcock forceps and handed to the assistant at the opposite side of the table. These two simple maneuvers will result in bringing the appendix immediately into view in 85 to 90 per cent of cases. Since over 70 per cent of appendices normally lie retrocecally and since the terminal ileum and its fat pad run parallel with the cecum the rationale of these two maneuvers is apparent.

The anatomy of the appendical artery should be emphasized if the serious complication of intra-operative hemorrhage is to be avoided. The appendical artery arises from the posterior cecal branch of the ileocolic artery. The artery to the appendix does not pass retrocecally, but takes a retro-ileal course. If, therefore hemorrhage from a slipped appendical artery should take place during the course of an appendectomy the ileal fat pad should be raised and the bleeding point searched for behind the terminal ileum. Retrocecal search for such a bleeding vessel will fail to reveal the source of hemorrhage.

Many methods of management of the appendical stump have been described, these too must remain a personal problem until definite evidence can be produced to substantiate the claim that one method is definitely superior to all the others.

SUMMARY

1. The mortality of acute appendicitis still remains high.

2. The Two Question Test has been useful in correctly diagnosing most cases of acute appendicitis.

3. The fallacy of right rectus rigidity as a diagnostic sign is discussed. The iliopsoas and obturator signs are stressed as signs which locate rather than diagnose an acute appendicitis.

4. A plan of treatment is presented which includes the management of both the early and the neglected case.

TETANOS DEL ADULTO EN EL HOSPITAL CIVIL DE GUADALAJARA, JALISCO, MEXICO
CUADRO CLINICO Y TRATAMIENTO
SUMARIO Y CONCLUCIONES

Por Los Drs. A. Ruiz Sanchez y F. Ruiz Sanchez
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Experimental de la Universidad de Guadalajara, Mexico

1. En el servicio de infectología del Hospital Civil de Guadalajara, durante los años de 1952 a 1957 tratamos 65 casos de tétanos, 17 (26%) de los cuales murieron en el curso de las primeras 12 a 36 horas de tratamiento, los cuales se descartan, quedando 48 casos para evaluar el tratamiento moderno de esta enfermedad.

2. *Sexo:* 42 (65%) eran hombres y 23 (35%) eran mujeres.

Edad. Los grupos mayoritarios comprendieron las edades de 10 a 50 años.

Puerta de entrada y agenta causal: en el 35% de los enfermos las manos fueron la localización de la puerta de entrada y la siguieron en orden de frecuencia los pies, el sitio de inyección intramuscular, el utero, etc. Las heridas por agentes punzocortantes, clavos, astillas, agujas hipodérmicas, *armas blancas* y alambres fueron las más tetánigeras, citándose también las quemaduras, las intervenciones quirúrgicas, los abortos provocados, etc. etc.

Incubación. Varió desde 1 a 4 días hasta 2 a 3 meses. En el mayor número de casos fué corta tratándose entonces de tétanos muy severos. En general, mientras más corta fué la incubación más servero fué el cuadro clínico.

3. *Aspecto Clínico.* El cuadro se caracterizó como un tetanoespasmo tónico de los músculos de la masticación y de los músculos espinales, habiéndose presentado el trismo en el 93% de los casos, la crisis sub-intrantes en el 92%, el opistotonos en el 81%, la rigidéz de la nuca en el 75%, la fiebre en el 87%. Clínicamente se agruparon los enfermos en las siguientes formas: sobre-agudas, agudas, sub-agudas, crónicas, sin trismo y localizadas.

4. *El tratamiento del tétano revistio tres aspectos:* El biológico, que consistió en el empleo de la antitoxina tetánica, con propósito de neutralizar la neurotoxina circulante; la quimioterapia, cuyos fines fueron matar los bacilos tetánicos y evitar la elaboración de exotoxinas; el asistencial que comprende el uso de agentes relajantes, sedantes, cardiotónicas, así como el cudidado de las vías aéreas para evitar los trastornos de la respiración, el espasmo de la glotis, la práctica oportuna de la traqueotomía, la correcta administración de líquidos, la administración de óxígeno etc. etc.

Administramos la antitoxina al 78% de los enfermos pero no pudimos precisar el verdadero valor de ésta, pues algunos de los enfermos que no la recibieron evolucionaron en igual forma que si la recibiesen. Usamos dosis promedias de 60,000 a 100,000 unidades diarias los primeros 3 a 6 días de tratamiento y como precisamente durante estos días hubo el índice más alto de mortalidad, no es posible determinar cual es el verdadero valor de la antitoxina en el tratamiento del tétanos.

Usamos la penicilina combinada con estreptomicina dada la susceptibilidad de los clostridios tetánicos a ellas, durante todos los días de enfermedad, que sin la menor acción sobre la exotocemia.

Como sedante cortical usando la clorpromazina a dosis de 25 miligramos una o dos veces al día por vía intramuscular y por excepción por vía venosa. Nos parece que se produce una sedación más útil que la lograda con los barbitúricos, los cuales los usamos como en dos terceras partes de los enfermos a dosis de 0.15 gramos o 0.30 gramos, intramusculares cada 6 horas al principio y una o dos veces día, en los días siguientes.

Nos pareces favorable el uso simultáneo de la difenhidramina (Benadryl) por vía oral o intramuscular a dosis de 50 a 200 miligramos. Los cuidados asistenciales nos parecieron de primerísima importancia en el logro del abatimiento del índice de mortalidad.

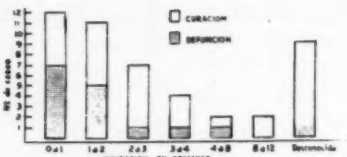
(English Translation on Page 103)

5. *Mortalidad.* En el grupo de enfermos tratados más de 48 horas logramos descender la mortalidad hasta 33%. Incluyendo los 17 enfermos que murieron en el curso los primeras 36 horas, la mortalidad ascendió a 50%. En términos generales la mortalidad fué más alta en el sexo femenino, entre 20 y 30 años de edad, cuando la vía de entrada fueron las inyecciones intramusculares o las heridas punzocortantes, cuando el período de incubación fué más corto y cuando el cuadro clínico fué severo o muy severo.

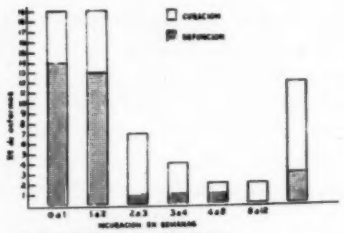
6. *Complicaciones.* Las complicaciones dominates fueron de dos tripos: las correspondientes a la enfermedad misma como la parálisis respiratoria, el espasmo laríngeo, la asfixia, el paro cardiaco, etc., y las que sobrevinieron por el tratamiento como las reacciones anafilácticas y la sobresedación de los enfermos con complicaciones respiratorias.

7. En tétanos se una enfermedad que dista mucho de ser controlada, no obstante de que se dispone de la vacuna para prevenirla y de la antitoxina para tratarlo; con medios biológicos, quimioterápicos y asistenciales se han logrado bajar significativamente los índices de mortalidad; sin embargo, a la fecha, en manos de los mejores clínicos y en las mejores condiciones de tratamiento se siguen muriendo de 3 a 6 enfermos de cada diez.

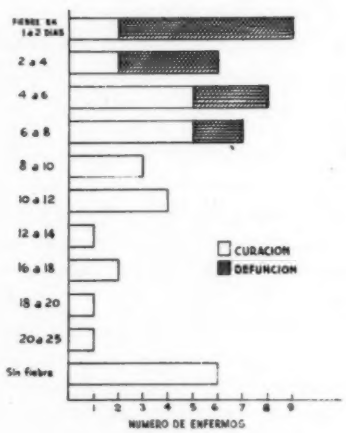
8. Urge encaminar los esfuerzos de la investigación clínica hacia un mejor conocimiento de la enfermedad y hacia el logro de medios terapéuticas que aplicadas tempranamente puedan dar un índice de cura ción más alta.



RELACION ENTRE EL PERIODO DE INCUBACION Y LA CURACION O LA MUERTE.
(Grupo de enfermos tratados más de 48 horas)



RELACION ENTRE EL PERIODO DE INCUBACION Y LA CURACION O LA MUERTE.
(Grupo total de enfermos)



RELACION ENTRE LA DURACION DE LA FIEBRE Y LA CURACION O LA DEFUNCION
(Grupo de enfermos tratados más de 48 horas)

TETANUS OF THE ADULT IN THE HOSPITAL CIVIL OF GUADALAJARA. CLINICAL PICTURE AND TREATMENT

By Amando Ruiz Sanchez, M.D. and Francisco Ruiz Sánchez, M.D.
(From the Instituto de Patologia Infecciosa Experimental
de la Universidad de Guadalajara, Mexico)

SUMMARY AND CONCLUSIONS

1. In the service of infectious diseases in the Hospital Civil of Guadalajara, Mexico, during the years from 1952 to 1957, we treated 65 cases of tetanus, 17 or 26 per cent of these died during the first 12 to 36 hours of treatment. Here we will consider the remaining 48 cases in order to evaluate modern treatment of this illness.

2. *Sex:* 42 or 65 per cent were men and 23 or 35 per cent were women.

Age: Most cases occurred between 10 to 50 years of age.

Portal of Entry and Causative Agent: In 35 per cent of these patients the wound which had served as portal of entry was located on the hand and the rest in order of frequency in the following parts of the body: feet, site of intramuscular injections, the uterus, etc. Pointed objects such as nails, slivers, hypodermic needles, knives and wires were the chief offenders but some cases developed following burns, surgical interventions, induced abortions, etc.

Incubation: It varied from one to four days up to two to three months. In most cases the incubation period was short and then we had very severe tetanus. In general the shorter the period of incubation, the more severe the clinical picture.

3. *Clinical Aspects:* The clinical picture was characterized by a tonic tetanospasm of the muscles of mastication and the spinal muscles. Trismus was present in 93 per cent of the cases. Subintrant crises were present in 92 per cent of the cases, opisthotonos in 81 per cent, rigidity of the nape of the neck in 75 per cent and fever in 87 per cent. All of the patients died when fever was consistently high. Clinically we classified the patients as follows: superacute, acute, subacute, chronic, without trismus and localized.

4. *Treatment of tetanus has the following three aspects:* Biological which consists in the administration of tetanus antitoxin with the object of neutralizing the circulating neurotoxin; chemotherapy whose end is to kill the tetanus bacilli and so prevent the formation of exotoxins; the supportive treatment including relaxing agents, sedatives, cardiovascular stimulants, attention to the air passages in order to avoid the respiratory complications and spasm of the glottis, prompt performance of tracheotomy when necessary, proper administration of fluids as indicated and the administration of oxygen when needed.

We gave antitoxin to 87 per cent of these patients but we were unable to correctly evaluate its true worth, because some of the patients who received no antitoxin progressed in the same way as those who did. We used average doses of 60,000 to 100,000 units daily for the first three to six days of treatment and since it was during those days that mortality was highest, it is not possible to determine what role antitoxin played in the treatment of tetanus.

We used the combination of penicillin and streptomycin because of the sensitivity of Clostridium tetani to it, during all the days of the disease. We have the impression that it has an effect on the bacterial infection but that it exerts absolutely no effect on the exotoxemia.

For cortical sedation we used Chlorpromazine in doses of 25 mgs. once or twice a day, by intramuscular route and rarely intravenously. We feel that it produces a better sedation than the barbiturates which we used in two-thirds of the patients in doses of 0.15 grams to 0.30 grams intramuscularly every six hours in the beginning of the illness and once or twice a day thereafter.

We believe it advantageous to use Difenhidramine (Benadryl) simultaneously either by oral or intramuscular route in doses from 50 to 200 mgs. We consider of prime importance proper nursing care in reducing the mortality.

5. *Mortality.* In the group of patients treated for more than 48 hours, we were able to reduce the mortality to 33 per cent. If we include the

(See Illustrations on Page 102)

17 patients who died in the course of the first 36 hours, the mortality rises to 50 per cent. In general, mortality was higher in women, between the ages of 20 and 30 years, when the portal of entry was through a wound produced by a sharply pointed instrument or hypodermic needle, when the incubation period had been very short and when the clinical picture was severe or very severe.

6. *Complications.* The predominant complications were of two types, those related to the illness itself, such as respiratory paralysis, laryngeal spasm, asphyxia, heart failure, etc. and those which occurred as a result of treatment, the anaphylactic reactions and over-sedation in those patients with respiratory complications.

7. Tetanus is an illness which is far from being controlled, in spite of the fact that there exists preventive vaccine and antitoxin for treatment. By means of biological treatment, chemotherapy and supportive treatment, the mortality has been significantly lowered; nevertheless, to date, in the most progressive clinics and under ideal conditions of treatment, patients continue to die from this illness at the rate of three to six out of every 10.

8. It is urgent that new efforts in clinical investigation be dedicated to achieving a better understanding of the illness, and to the discovery of more efficient therapeutic measures which instituted early in the illness may bring about a greater percentage of cures.

BLOOD SUPPLY IN THE SOUTHWEST*

By Dermont W. Melick, M.D.
Phoenix, Arizona

THE BLOOD supply upon which most of us depend comes from the Southwest Blood Bank. As you may or may not know, Southwest Blood Bank had its origin in Phoenix and was sponsored by the Maricopa County Medical Society. The contribution originating from the Phoenix area to get the bank started amounted to approximately $22,000; 95 per cent of this amount was raised among groups and individuals outside of the medical profession. It therefore had its inception as a true community effort and so it has continued to the present date. Southwest Blood Bank represents, therefore, an experiment in free enterprise and it has now grown into an institution of national stature. This growth can be traced to the basic philosophy of Southwest Blood Bank. This organization is ready and willing to help any city or area, be it large or small, in solving blood transfusion problems. This willingness to help, however, must be qualified by a specific invitation from the county medical society wherein the service is needed. The emphasis is placed thereby on each local county medical society in that it must first recognize its own needs. By this policy a great many distressing and controversal problems have been avoided. This approach "by invitation" rather than "by invasion" has proved to be eminently successful to date.

It can be said without hesitation that Southwest Blood Bank represents a great contribution to medicine and surgery. We as the Arizona parents of this organization should be the first to recognize its contribution and be more than justly proud of the place that Southwest Blood Bank now occupies as a top drawer organization in the blood transfusion field. The efficiency of this organization, plus its ability to deliver unlimited amounts of blood both in quantity and quality borders on the phenomenal. I would like to illustrate the foregoing statement. In one three-day period in Houston, Texas, a patient required 38 pints of A-B Negative blood. To appreciate this problem, you must realize that the number of A-B Negative blood types is less than 1 per cent of any given population. It would, therefore, take 6,000 donors in order to get 38 A-B Negative blood units. The problem is not quite so simple, however, when one realizes that there must be eliminated those individuals who are too young, too old, or who are physically unable to give blood. In actuality then, it would take in the neighborhood of 25,000 people to supply the 38 pints of A-B Negative blood. It would be physically impossible for one bank to screen and draw 6,000 donors in three days. A mass appeal for donors would be unsuccessful as many people do not know their own blood type and this approach would be so time wasting as to be prohibitive. Southwest Blood Bank delivered the 38 pints of A-B Negative blood without difficulty.

Again in Houston, a request was made for 20 units of freshly drawn A Negative blood. The request specified that this blood could not be more than 24 hours old and was needed at 8 o'clock the next morning. Houston, at that time, was "bankrupt" as far as A Negative units were concerned. Phoenix was contacted and the Phoenix staff went through their donor list and called in enough donors so the blood was processed and shipped by air to Houston that night and it was delivered to the hospital for surgery at the required hour the next morning.

We do a great deal of talking about civil defense and everyone recognizes that in the case of a major disaster blood will be needed in unforseen amounts. Southwest Blood Bank will be able to respond if, and when, the emergency arises. To illustrate how this chain of command will function, I might give you a few instances of recent occurrence. A train wreck occurred in Raton Pass, New Mexico, in November of 1956. A call went out for blood with the information that an undetermined number of injured persons would soon be hospitalized and many would be in need of transfusions. The Southwest Blood Bank in Lubbock, Texas; Albuquerque, New Mexico; San Antonio, Texas; El Paso, Texas; and Phoenix, Arizona were immediately alerted, as well as other blood banks in Denver and lower Colorado. The Southwest Blood Bank of Albuquerque was designated as the co-ordinator and was told to stand by on a 24 hour basis. Within a matter of minutes, eight

*Presidential Address – Arizona Chapter – American College of Surgeons – Chandler, Arizona – December 6, 1957.

blood banks were ready for the emergency.

Reno, Nevada has had two occasions to call on Southwest for emergency service. In 1956, an explosion resulted in an undetermined number of injured. Southwest Blood Bank in Phoenix, and Albuquerque were alerted and immediate contact was made with the air force in Phoenix and Las Vegas. Jet planes were standing by to fly blood to Reno. The Luke Air Force Base offered to use Sky Harbor Airport in Phoenix to pick up the blood if the saving of a few precious minutes would make any difference. On another occasion Reno was flooded and it was impossible to get blood in the usual manner. Donors could not get to hospitals or to other places where their blood could be drawn and the Reno airport was under water. Southwest Blood Bank in Phoenix flew blood to Fallon, the nearest airport to Reno, and arrangements were made there for the highway patrol to pick up the blood and deliver it to Reno. It is recognized that these are "minor" emergencies, but it does emphasize, beyond a shadow of a doubt, that Southwest is willing and able to rise to the occasion when an emergency exists. This ability rests on the fact there are 12 complete banks in the Southwest chain and four sub-banks covering nine different states. Each bank is on the alert to supplement the supply of a sister bank if, and when, the blood needed is not available in the local bank. I am sure you will be interested to know that Southwest Blood Bank at the present time is the largest medically supervised and medically governed self-supporting, not for profit, blood bank in the world. It now serves an area having a population of between 10 and 12 million people and gives services to 450 hospitals.

Of particular importance to some of us interested in cardiac surgery, the following will be most revealing. For each case of open heart surgery, the cardiac surgeon in Houston, Texas, requires 6 pints of blood in heparin drawn no earlier than the night before surgery, 8 pints of fresh blood which have been drawn within the past 24 hours, and an additional 30 pints of the patient's blood type on hand. This makes a total of 44 pints of blood that must be available for each case of open heart surgery. At least three such operations are performed each week in Houston. The ability of Southwest Blood Bank in Houston to adequately meet this demand has brought a great deal of praise from the Houston surgeons. I am sure that the experience in Houston will be of great value to any other individual, or group, who plan to attempt this type of surgery. The Phoenix doctors can rest assured, therefore, that one of the least of their worries is going to be an adequate supply of blood when the day comes for beginning open heart surgery.

Southwest Blood Bank has another very commendable accomplishment which I would like to bring to your attention at this time. This is the Southwest Blood Service Plan. This is a studied attempt to bring blood transfusion service to your patients at the least possible cost to them. It allows them to protect themselves for the use of unlimited quantities of blood at a very nominal fee. For one dollar, your patient can be assured of all the blood he may need for one full year. For a man and wife, the cost is two dollars per year; for a man and wife and one child, the cost is three dollars, and if there are four *or more* in one family, the cost is four dollars a year. There is no additional charge for a family that has more than four members. This original approach to the economic problem of blood transfusion has now had two years of study and research. It is the first proposal of its type. It is being well received in other parts of the United States. In California, the plan is set up in almost identical manner. In Chicago, Illinois, the basic planning has been the same with the exception that a person may donate a pint of blood at any hospital blood bank and receive blood coverage for himself and family of four for all blood needs over a one year's period.

This plan fits the needs of the people living in rural areas. Many times it is difficult for these people to replace blood or to meet the financial obligations for blood bank services. The Blood Service Plan eliminates these problems. The reason this plan can be offered to your patients for a nominal fee is the fact that there is no advertising and no expensive promotional schemes to sell this blood service. The salesmen for Southwest Blood Service Plan must be the doctors, the hospital administrators or the patients who have benefited from the plan. I bring this plan to your attention mainly to appeal to you to pass along this information to your patients so they may take advantage of this service.

The President's Page

IN 1948 THERE WAS A MEETING IN SALT LAKE CITY TO CONSIDER THE POSSIBILITY OF A COMPACT BETWEEN THE WESTERN STATES FOR THE PURPOSE OF MAKING AVAILABLE PROFESSIONAL EDUCATION TO MORE STUDENTS.

THIS COMPACT WAS FINALLY AGREED UPON AND RATIFIED BY THE STATE OF ARIZONA IN 1952. IT GIVES FINANCIAL HELP TO THESE PROSPECTIVE DOCTORS, DENTISTS AND VETERINARIANS UP TO $2,000 PER YEAR. THIS IS A MOST WORTHWHILE PROJECT FOR BOTH THE PROSPECTIVE STUDENTS AND THE STATE.

THE STATE OF ARIZONA HAS NO MEDICAL, DENTAL OR VETERINARIAN SCHOOL. TO DATE 60 STUDENTS HAVE PARTICIPATED IN THIS PLAN; 23 IN MEDICINE, NINE IN DENTISTRY AND 28 IN VETERINARIAN MEDICINE. MORE STUDENTS, ESPECIALLY DENTISTS, COULD HAVE BEEN ACCOMMODATED IF THEIR COLLEGE GRADES HAD BEEN UP TO THE ENTRANCE REQUIREMENTS.

THE APPLICANT MUST BE A RESIDENT OF THE STATE OF ARIZONA FOR AT LEAST 10 YEARS. HE IS ALLOWED $2,000 PER YEAR AND IS REQUIRED TO PRACTICE IN THE STATE FOR EIGHT YEARS TO REPAY THE LOAN. IF HE DOES NOT PRACTICE IN THE STATE OF ARIZONA, THE TOTAL AMOUNT IS DUE WITH INTEREST.

IT IS FELT BY ALL THE COMMITTEE, HEADED BY D. W. MELICK, M.D., THAT THE PRESENT REQUIREMENTS ARE TOO HIGH. A BILL HAS BEEN INTRODUCED INTO THE ARIZONA STATE LEGISLATUREAT THE PRESENT SESSION TO CHANGE THIS.

AT THIS TIME 40 PER CENT OF THE POPULATION HAVE LIVED IN ARIZONA FOR FIVE YEARS OR LESS. FOR THIS REASON, THE PROPOSED BILL CUTS THE RESIDENCE REQUIREMENT TO FIVE YEARS. ONLY ONE OTHER STATE IN THE WESTERN COMPACT REQUIRES FOUR YEARS OF PRACTICE IN PLACE OF ARIZONA'S EIGHT. NO STATE WHICH SUPPORTS MEDICAL, DENTAL OR VETERINARY SCHOOLS REQUIRES A PAYMENT IN THE FORM OF PRACTICE IN THAT STATE ITS RESIDENT GRADUATES. IT IS PROPOSED THAT THE OBLIGATION TO RETURN TO PRACTICE IN THE STATE OF ARIZONA BE REDUCED OR ELIMINATED.

AN EXAMPLE OF THIS IS THAT GRADUATES OF THE UNIVERSITY OF ARIZONA LAW SCHOOL, WHETHER RESIDENTS OR NOT, ARE NOT REQUIRED TO PRACTICE IN THE STATE. IT IS ALSO KNOWN THAT THE TUITION CHARGED THE LAW STUDENT DOES NOT BEGIN TO PAY THE COST OF HIS EDUCATION.

THE COMMITTEE WHICH INTRODUCED THE BILL IN THE LEGISLATURE FELT THAT IT WAS A GOOD AND PROGRESSIVE ONE. WE ASK THE WHOLEHEARTED SUPPORT OF THE MEDICAL PROFESSION OF THIS BILL.

C. C. CRAIG, President
Arizona Medical Association, Inc.

Editorial Page

ARIZONA MEDICINE

Journal of

ARIZONA MEDICAL ASSOCIATION, INC.

VOL. 15 FEBRUARY, 1958 NO. 2

CONTRIBUTORS

The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Manuscripts should be typewritten, double spaced, and the original and a carbon copy submitted.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.
7. Exclusive Publication—Articles are accepted for publication on condition that they are contributed solely to this Journal. Ordinarily contributors will be notifed within 60 days if a manuscript is accepted for publication. Every effort will be made to return unused manuscripts.
8. Illustrations — Ordinarily publication of 2 or 3 illustrations accompanying an article will be paid for by Arizona Medicine. Any number beyond this will have to be paid for by the author.
9. Reprints — Reprints must be paid for by the author at established standard rates.

The Editor is always ready, willing, and happy to help in any way possible.

(The Opinions expressed in original contributions do not necessarily express the opinion of the Editorial Board.)

THE AMERICAN WAY EXEMPLIFIED

NEWSPAPERS and magazines of the world are full of articles about our failure to keep pace in scientific achievements. Our government has invaded many fields of endeavor, and is now attempting to gain control of our educational system, including medicine. At such a time it is inded encouraging to read the 40-page report of the Smith, Klein and French Foundation. This is one of the first detailed public accountings of the philanthropies of some of our corporations.

The Smith, Klein and French Foundation in the last four years has contributed approximately $1.5 million to philanthropies. The majority of these monetary gifts has been used to advance medical education and basic research. All corporate philanthropies for 1956 are estimated to have been $500 million. This is the American way of promoting progress.

Our free enterprise system of the past was the most productive of any form of government yet to be evolved. It gained leadership in all fields, yet preserved the freedom of its peoples. The successes of our system of life was materially weakened in the past two decades, during which time we allowed our government to take the reins in too many fields. If this governmental meddling is not reversed, we may expect to witness further evidences of deterioration.

Our failure to keep ahead of Russia's recent scientific achievements is indeed a paradox, because our failure is due to the confusion and instability created by governmental control, whereas Russia has accomplished its scientific standing with absolute governmental control. History has shown, that although totalitarian governments can succeed in some material fields temporarily, these governments are short lived because of their failure in sociology. It is very disturbing, however, that before the Russian dictatorship by "The New Class" falls of its own inherent weaknesses, it will wreak havoc with other nations.

The philanthropies of our corporate bodies and individuals are admirable examples of the American way at work. This system will accomplish more than our bureaucratic government or its successor, totalitarianism. L.B.S.

"MY PATIENT"

ONE of the most frequent remarks one hears in the shop talk of doctors is "my patient." They talk in the most possessive manner. Too often they regard the patient as personal property. Some doctors actually become perturbed when they see a previous patient admitted to a hospital on another doctor's service. They go so far as to remark that doctor so-and-so "stole" their patient.

The patient chooses the doctor. The doctor does not choose the patient. Don't flatter yourself because a patient consults you in your office or calls you to his home. Don't become too possessive. Remember that the patient is there just so long as you render him service that is satisfactory to him at a price he is willing to pay. You must play fair with that patient.

A busy doctor may send a younger doctor to call on one of his patients. The patient may be pleased with that service and call that doctor when he desires his services. The patient has every right to do this, and the younger doctor has every right to render this service.

In order to maintain the patient as "your patient," it is necessary for you to render satisfactory service.

—*Pennsylvania Medical Journal, October 1947*

NOTICE

IN Dr. Hamer's article on the action of the AMA House of Delegates at its December meeting in Philadelphia, attention is drawn to "free choice of physician." Since this has been a controversy in our state within recent months, the attention of our membership is drawn to this very clearly stated policy of the AMA. It would seem to answer many of the ramifications of charges and counter-charges that have existed. The council opinion of 1927 which was reaffirmed in Philadelphia states that contract practice of medicine would be determined to be unethical if "a reasonable degree of free choice of physician is denied those cared for in a community where other competent physicians are readily available."

A PHYSICIAN'S PRAYER

By Father James Keller, M.M.*

THANK you, O Lord, for the privilege of being a doctor — for letting me
serve as Your instrument in ministering to the sick and afflicted.
May I always treat with reverence the human life, which You
have brought into being.
Keep me constantly alert to see that the sacred right to live is never
violated for even the least individual.
Deepen my love for people so that I will always give of myself
gladly and generously to those stricken with illness and suffering.
Help me to listen patiently, diagnose carefully, prescribe conscientiously
and follow through faithfully.
Teach me to blend gentleness with skill, to be a doctor with a
heart as well as a mind.
Let me be calm without being cold, patient without being weak,
and strong without being proud.
Help me, Lord, to give encouragement without overconfidence,
to tell the truth without being blunt.
May I be prompt to relieve pain, quick to hold out the
hand of honest hope.
Inspire me to show always a special tenderness for the poor and
forgotten, for those who are broken in spirit as well as in body.
Grant that I may continually bring to my work the same
soothing compassion which You so generously displayed centuries ago in healing the sick of Galilee.
And finally, O Divine Doctor, through my service to the sick, may I
merit the heavenly reward which You promised in these thrilling words: "Come you blessed of my Father, possess you the kingdom prepared for you from the foundation of the world." (*Matt.* 25-24)

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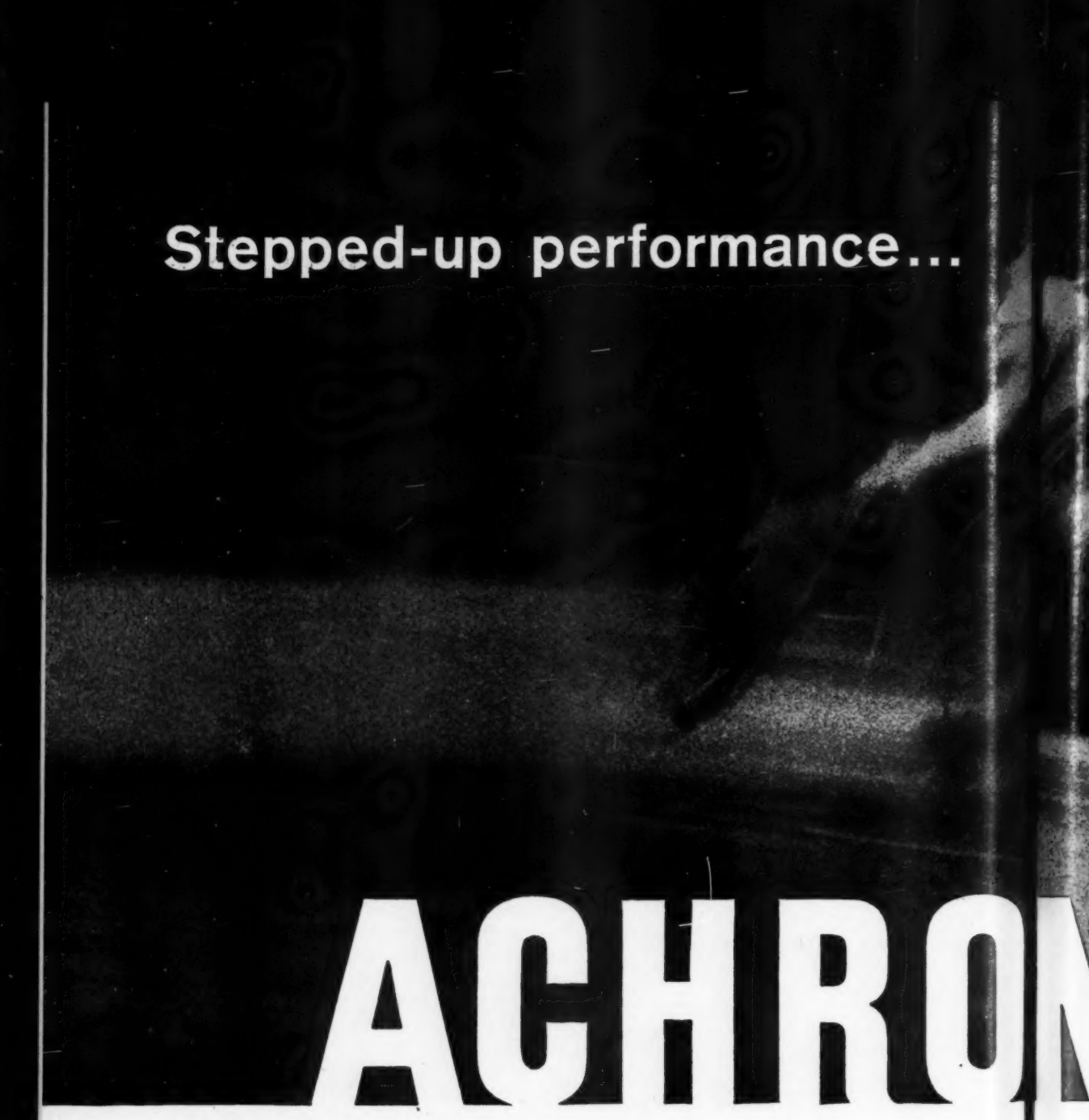
*Father Keller was born in Oakland, Calif., in 1900 and was ordained a Roman Catholic priest in 1925. He is the founder and director of The Christophers, Inc., and resides in New York. His most recent book is "Stop, Look and Live."



New rapid-acting ACHROMYCIN V Capsules offer more patients consistently high blood levels—at no sacrifice to the broad anti-infective spectrum of ACHROMYCIN Tetracycline, its low incidence of side effects, or its dosage and indications.

The pure, unaltered crystalline tetracycline HCl molecule of ACHROMYCIN, now buffered with citric acid, provides

MYCIN V*

Tetracycline HCl Buffered with Citric Acid

prompt and high blood levels, faster broad-spectrum action ...rapidly decisive control of infections. New ACHROMYCIN V Capsules do not contain sodium.

REMEMBER THE V WHEN SPECIFYING ACHROMYCIN V

CAPSULES: (blue-yellow) 250 mg. tetracycline HCl (buffered with citric acid, 250 mg.); 100 mg. tetracycline HCl (buffered with citric acid, 100 mg.). **ACHROMYCIN V DOSAGE:** Recommended basic oral dosage is 6-7 mg. per lb. body weight per day. In acute, severe infections often encountered in infants and children, the dose should be 12 mg. per lb. body weight per day. Dosage in the average adult should be 1 Gm. divided into four 250 mg. doses.

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Lederle

*Reg. U.S. Pat. Off.

LETTERS TO THE EDITOR

Editor:

TO complete our telephone conversation, I should like to give you the following items that I think would be of interest to the physicians in Arizona.

We have another "first" for Phoenix and Arizona. It is an artificial kidney, complete with an experienced team to run it. It is one of the first artificial kidneys available outside a teaching center or university. In the last six months we have used the artificial kidney six times in three cases and our recent experiences will appear in a later issue of Arizona Medicine, but since there are some patients who could be benefitted before this article is available, it might be well to enumerate certain kinds of cases that might be benefitted by the artificial kidney. They are:

1. Cases of acute tubular necrosis following hypotension due to trauma, blood loss, bone fractures, or carbon monoxide poisoning.

2. Hemoglobin or myohemoglobinuric nephrosis due to transfusion reaction, burns, hemolytic anemia, sickle cell crisis, eclampsia or hemolysis with transurethral prostatectomies.

3. Removal of poisonous toxins such as bichloride of mercury, alloxan, carbon tetrachloride, cresol, diethylene glycol (anti-freeze), poisonous mushrooms, sulfonamides, chlorate ion, bichromate, tartrate, roentgen contrast media (angiocardiography), bacterial toxins.

4. Intoxications without primary renal damage, such as bromides, aspirin, barbiturates, thiocyanate.

5. In certain instances of acute glomerulonephritis, chronic renal disease, or intractable edema.

If you are interested, you should probably know that the artificial kidney team at this time consists of Dr. Kenneth Johnson, Dr. George Hazlehurst, Dr. Meyer Markovitz, Dr. Robert Beers, and Dr. Eleanor Waskow. The kidney machine is presently available at St. Joseph's Hospital in Phoenix.

Kenneth E. Johnson, M.D.

Editor:

I HAVE been asked by the board to express their most grateful thanks and appreciation to the Arizona Medical Association and to its membership for their recent gift of $8,122.50 for the instructional and research programs of our medical schools.

This significant support to the foundation is but the latest of many gifts from the physicians of Arizona who, from the first days of our work, have led in their interest and support of medical education.

Please thank your membership for their substantial and important contribution.

George F. Lull, M.D.,
AMA

Editor:

THE following reprint of the Resolution of the Santa Barbara County Medical Society is our action to refuse and reject the California Medical Welfare Program (Assembly Bill—679). This bill, passed by the California legislature, is the state's action to match funds provided by the federal government (HR 7225) for tax paid medical care of those on old age security and other related groups. (It is not the pending Forand Bill.)

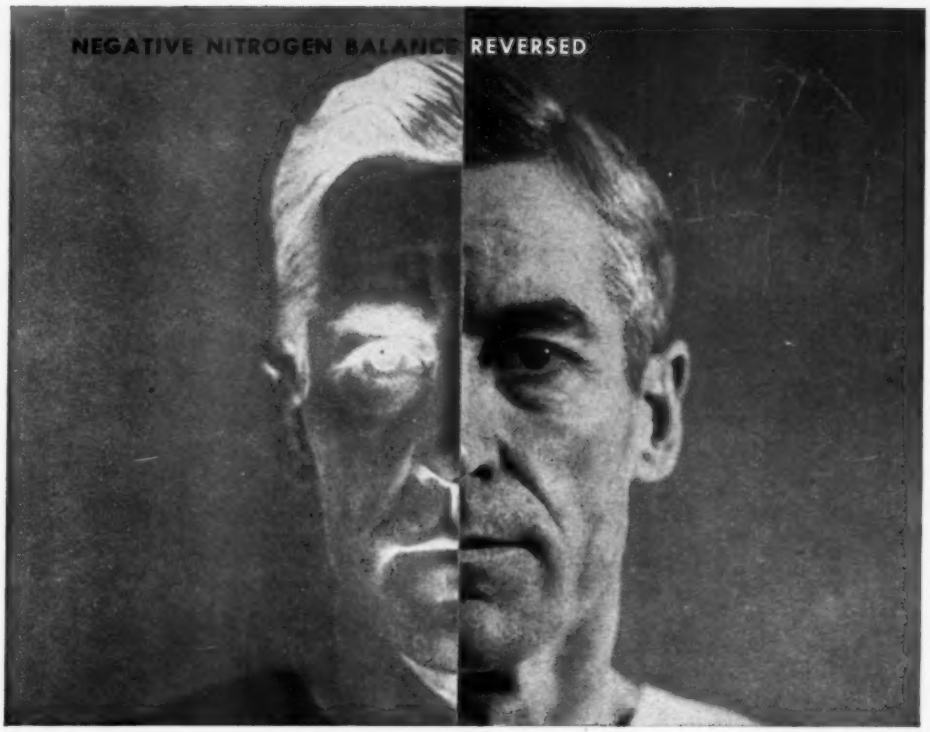
We have temporarily lost the battle at the state level, but we believe we can win the battle at the county level. If other county medical societies throughout the United States will take similar action, and offer their own alternate plan, we believe socialized medicine can be defeated in every state and on a national level.

The Resolution was adopted by 88 per cent of the active members of the Santa Barbara County Medical Society.

This letter and copy of our Resolution was published in all local newspapers and is being sent to the 1,922 medical societies in the United States, all state medical societies, all California legislators, all members of the United States congress, and other civic organizations who may help us in our fight against state and national socialized medicine.

DOUGLAS F. McDOWELL, M.D.,
President
ROBERT I. CORD, M.D.,
Secretary,
Santa Barbara County Medical Society,
300 West Pueblo St.,
Santa Barbara, Calif.

(Continued on Page 114)



Nilevar®

stimulates protein synthesis, corrects negative nitrogen balance

Increased nitrogen loss, with resulting negative nitrogen balance, occurs in infection, trauma, major surgery, extensive burns, certain endocrine disorders and starvation and emaciation syndromes. The intrinsic control of protein metabolism is lost and a protein "catabolic state" occurs. A patient requiring more than ten days of bedrest usually has had sufficient metabolic insult[1] to precipitate such a "catabolic" phase.

Nilevar (brand of norethandrolone) has been used in patients with varied conditions including hyperthyroidism, poliomyelitis, aplastic anemia, glomerulonephritis, anorexia nervosa and postoperative protein depletion. The patients gained weight and felt better. It was concluded[2] that "the drug certainly caused a reversal of rather recalcitrant or progressive catabolic patterns of disease."

Nilevar is unique among anabolic steroids in that androgenic side action is minimal or absent.

The suggested adult dosage is three to five tablets (30 to 50 mg.) daily. For children 1.5 mg. per kilogram of weight is recommended.

G. D. Searle & Co., Chicago 80, Illinois.
Research in the Service of Medicine.

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1. Axelrod, A. E.; Beaton, J. R.; Cannon, P. R., and others: Symposium on Protein Metabolism, New York, The National Vitamin Foundation, Incorporated, (March) 1954, p. 100.

2. Proceedings of a Conference on the Clinical Use of Anabolic Agents, Chicago, Illinois, G. D. Searle & Co., April 9, 1956, pp. 32-35.

SEARLE

RESOLUTION
of the
SANTA BARBARA COUNTY MEDICAL SOCIETY

On this 25th day of November 1957, the members of the Santa Barbara County Medical Society have met in special session. It is the studied belief of the majority of the members that the following facts are evident:

That the new California Public Assistance Medical Care Program as provided by AB-679, effective Oct. 1, 1957, is "socialized medicine," to be paid for by state and federal taxation.

That the complete socialization of medicine will be attempted. This new program professes to provide for the medical care of all recipients of old age security, and some other groups receiving state and federal aid. In a short time, political pressure groups will undoubtedly introduce legislation to include medical care for all recipients of social security. Other groups to follow may include veterans and their families, federal employes and labor groups, seeking medical care. *By this piecemeal addition of groups of the population, medicine would be entirely socialized.*

All Are Threatened

That the socialization of medicine would be a stepping stone to the socialization of all other professions, all other businesses, all other industries and the complete destruction of our free enterprise system.

That the present free enterprise system of medicine with its allied research and production of the medical drug industry, has given the people of the United States the highest standard of medical care in the world.

That the shift to a tax-paid plan will immediately lead to severe abuses; and that many will demand unneeded prescriptions for drugs and medical care because they are "free."

Staggering Taxes

That the cost to the taxpayer for the administration alone of such county, state and federal welfare plans in part, or in whole, would reach a staggering figure, and the total cost of administration, medical service and drugs needed or not needed, would reach a tax figure beyond our present imagination.

That the quality of medical care will decline in any large welfare group through frustration and lack of incentive for free enterprise on the part of the physician.

It is further believed that the need for such a medical service welfare program in Santa Barbara County *does not exist.* In the past, the physicians of this county, by services rendered in their offices and through free care given at the county hospitals and county clinics, have provided all needy groups with adequate, and most often excellent medical care. *This has all been acomplished at a relatively small cost to the taxpayer.*

Do Not Want Socialism

Believing further that the majority of American citizens do not truly wish a socialized state, a socialized nation or socialized medicine, we, the undersigned members of the Santa Barbara County Medical Society, reject and refuse to accept the new California Public Assistance Medical Care Program.

In its place, where *any person* or a responsible member of his family is financially unable to pay for medical services (exclusive of the cost of prescribed medicines that have in the past been paid for by welfare funds), we will continue to provide this service *free of charge* or make proper arrangements for the patient to receive care at our county hospital or county clinics.

SANTA BARBARA COUNTY MEDICAL SOCIETY
300 W. Pueblo St. Santa Barbara, Calif

Topics of Current Medical Interest

ACTIONS OF AMA HOUSE OF DELEGATES

Philadelphia, Pa.

Jesse D. Hamer, M.D., Vice President and Delegate

IN ORDER that the membership of our association may receive a summary of the more important subjects dealt with by the House of Delegates of the American Medical Association during its 11th clinical meeting held in Philadelphia, Dec. 3 through 6, 1957, your delegate to and vice president of the AMA is privileged to submit the following report.

Fluoridation of public water supplies, free choice of physician, the Heller report on organization of the American Medical Association, the Forand Bill providing hospital and surgical benefits for social security beneficiaries, guides for occupational health programs covering hospital employes, distribution of Asian influenza vaccine, and guides for the medical rating of physical impairment were among the variety of subjects acted upon.

Dr. Cecil W. Clark of Cameron, La., was named 1957 General Practitioner of the Year after his selection by a special committee of the board of trustees for outstanding community service. Dr. Clark, 33-year-old country doctor who was a medical hero during Hurricane Audrey last June, was present at the meeting to receive the gold medal which goes with the annual award.

Speaking at the opening session on Tuesday, Dr. David B. Allman of Atlantic City, N.J., AMA president, called for "more freedom, not less, in America and in the medical profession." Dr. Allman urged the delegates to embark on local action campaigns to enlist full community support in opposition to the Forand Bill, a pending congressional proposal which would provide hospital and surgical benefits for persons who are receiving or are eligible for social security retirement and survivorship payments. The Forand Bill, he said, is "cut from the same cloth" as national compulsory health insurance and "emanates from the same minds."

Fluoridation of Water

In settling the most controversial issue at the Philadelphia meeting, the house of delegates approved a joint report of the council on drugs and the council on foods and nutrition which endorsed the fluoridation of public water supplies as a safe and practical method of reducing the incidence of dental caries during childhood. The 27-page report on the study, which was directed by the house at the Seattle clinical meeting one year ago, contained these conclusions:

"1. Fluoridation of public water supplies so as to provide the approximate equivalent of 1 ppm of fluorine in drinking water has been established as a method for reducing dental caries in children up to 10 years of age. In localities with warm climates, or where for other reasons the ingestion of water or other sources of considerable fluorine content is high, a lower concentration of fluoride is advisable. On the basis of the available evidence, it appears that this method decreases the incidence of caries during childhood. The evidence from Colorado Springs indicates as well a reduction in the rate of dental caries up to at least 44 years of age.

"2. No evidence has been found since the 1951 statement by the councils to prove that continuous ingestion of water containing the equivalent of approximately 1 ppm of fluorine for long periods by large segments of the population is harmful to the general health. Mottling of the tooth enamel (dental fluorosis) associated with this level of fluoridation is minimal. The importance of this mottling is outweighed by the caries-inhibiting effect of the fluoride.

"3. Fluoridation of public water supplies should be regarded as a prophylactic measure for reducing tooth decay at the community level and is applicable where the water supply contains less than the equivalent of 1 ppm of fluorine."

Free Choice of Physician

Acting on the issue of free choice in relation to contract practice, the house passed a resolution which reaffirmed approval of previous interpretations of the Principles of Medical Ethics by the association's judicial council and directed that they be called to the attention of all constituent associations and component societies. One council opinion, issued in 1927 and reaffirmed in Philadelphia, stated that the contract practice of

medicine would be determined to be unethical if "a reasonable degree of free choice of physician is denied those cared for in a community where other competent physicians are readily available." The resolution also cited a council opinion, published in the Oct. 19, 1957, issue of the Journal of the AMA, which stated that the basic ethical concepts in both the 1955 and 1957 editions of the Principles of Medical Ethics are identical in spite of changes in format and wording. This opinion added that "no opinion or report of the council interpreting these basic principles which were in effect at the time of the revision has been rescinded by the adoption of the 1957 principles."

The 1927 council report also pointed out that "there are many conditions under which contract practice is not only legitimate and ethical, but in fact the only way in which competent medical service can be provided." Judgement of whether or not a contract is ethical, the report said, must be based on the form and terms of the contract as well as the circumstances under which it is made.

In another action related to the issue of free choice, the house adopted a resolution condemning the current attitude and method of operation of the United Mine Workers of America Welfare and Retirement Fund "as tending to lower the quality and availability of medical and hospital care to its beneficiaries." The resolution also called for a broad educational program to inform the general public, including the beneficiaries of the fund, concerning the benefits to be derived from preservation of the American right to freedom of choice of physicians and hospitals as well as observance of the "Guides to Relationships Between State and County Medical Societies and the UMWA Welfare and Retirement Fund" which were adopted by the house last June.

The Heller Report

Acting on the report of the committee to study the Heller report on organization of the American Medical Association, the house reached the following decisions on 10 specific recommendations:

1. The office of vice president will be continued as an elective office.

2. The offices of secretary and treasurer will be combined into one office to be known as secretary-treasurer, and that officer will be selected by the board of trustees from one of its number.

3. The duties of the secretary-treasurer will be separated from those of the executive vice president.

4. The office of general manager will be discontinued, and the new office of executive vice president will be established. The latter, appointed by the board of trustees, will be the chief staff executive of the association.

5. The council on medical education and hospitals and the council on medical service will continue as standing committees of the house of delegates, but their administrative direction will be vested in the executive vice president.

6. The voting members of the board of trustees will be limited to 11 – the nine elected trustees, the president and the president-elect. The vice president and the speaker and vice speaker of the house of delegates will attend all board meetings, including executive sessions, with the right of discussion, but without the right to vote.

7. The house disapproved of the proposal to elect the trustees from each of nine physician-population regions.

8. The office of assistant secretary will be discontinued, and a new office of assistant executive vice president will be established.

9. The committee on federal medical services will be retained as a committee of the council on medical service, and will not become a part of the council on national defense.

10. The speaker of the house will appoint a joint and continuing committee of six members, three from the board of trustees and three from the house, to redefine the central concept of AMA objectives and basic programs, consider the placing of greater emphasis on scientific activities, take the lead in creating more cohesion among national medical societies, and study socio-economic problems.

The accepted recommendations were referred to the council on constitution and by-laws with a request to draft appropriate amendments for consideration by the house at the 1958 annual meeting in San Francisco.

The Forand Bill

The house condemned the Forand Bill as undesirable legislation, approved the firm position taken in opposition to it, and expressed satisfaction that the board of trustees has appointed

a special task force which is taking action to defeat the bill. In a related action, giving strong approval to Dr. Allman's address at the opening session, the house adopted a statement which said:

"It is particularly timely that our president has so forcefully sounded the clarion call to the entire profession for emergency action. With complete unity, definition and singleness of purpose, closing of ranks with all age groups and elements of our organization we must at this time stand and be counted. Thus we can exert the physician's influence in every possible direction against invasion of our basic American liberties in the form of proposed legislation alleged to compulsorily insure one segment of the population against health hazards at the expense of all."

Health Programs for Hospital Employes

A set of "Guiding Principles for an Occupational Health Program in a Hospital Employe Group" was approved by the house. The guides were developed by a joint committee of the American Medical Association and the American Hospital Association and already had been formally approved by the AHA. They include these statements:

"Employes in hospitals are entitled to the same benefits in health maintenance and protection as are industrial employes. Therefore, programs of health services in hospitals should use the techniques of preventive medicine which have been found by experience in industry to approach constructively the health requirements of employes.

"It is essential that employe health programs in hospitals, as in industry, be established as separate functions with independent facilities and personnel. The fact that hospitals are engaged in the care of the sick as their primary function does not alter the necessary organizational plan for an effective occupational health program."

Asian Influenza Vaccine

The house considered three resolutions dealing with the Asian influenza immunization program and then adopted a substitute resolution calling attention to "certain inadequacies and confusions in the distribution of vaccines" and directing the board of trustees to seek conferences through existing committees "with a view to establishing a code of practices regulating the future distribution of important therapeutic products, so that the best interest of all the people may be served." The resolution pointed out that the American Medical Association already has a joint committee with the American Pharmaceutical Association and the National Association of Retail Druggists, in addition to a liaison committee with the Drug Manufacturers' Association.

Medical Rating of Physical Impairment

The house accepted a 115-page "Guide to the Evaluation of Permanent Impairment of the Extremities and Back" which was developed by the committee on medical rating of physical impairment as the first in a projected series of guides. The delegates commended the committee for doing "a superb job on this difficult subject" and expressed pleasure that the guides will be published in the Journal of the AMA. The guides are expected to be of particular help to physicians in determining impairment under the new disability benefits program of the Social Security Act.

Miscellaneous Actions

Among a wide variety of other actions, the house also:

Directed that a new committee be established in the council on industrial health to study neurological disorders in industry.

Noted with approval the establishment of the American Medical Research Foundation, which will initiate and encourage necessary medical research and correlate and disseminate the results of studies already under way.

Decided that informational materials which are sent to AMA delegates should also be sent to all alternate delegates.

Affirmed that it is within the limits of ethical propriety for physicians to join together as partnerships, associations or other lawful groups provided that the ownership and management of the affairs thereof remain in the hands of licensed physicians.

Instructed that the appropriate committee or council should engage in conferences with third parties to develop general principles and policies which may be applied to the relationship between third parties and members of the medical profession.

Urged state medical society committees on aging and insurance to make continuing studies

of pre-retirement financing of health insurance for retired persons.

Endorsed a suggestion that the committee on federal medical services sponsor a national conference on veterans' medical care during 1958.

Asked the board of trustees to study the feasibility of having the association finance a thorough investigation of the social security system by a qualified private agency.

Suggested that physicians and their friends make a vigorous effort to obtain congressional enactment of the Jenkins-Keogh bills.

Approved the "Suggested Guides to Relationships Between Medical Societies and Voluntary Health Agencies."

Strongly recommended that a completely adequate and competent medical department be established in the Civil Aeronautics Administration directly responsible to the CAA administrator, and

Congratulated the General Electric Company for its medical television presentations on the subject of quackery.

Opening Session

At the Tuesday opening session, Rear Adm. B. W. Hogan, Surgeon General of the U. S. Navy, presented the Navy Meritorious Public Service Citation to Dr. Dwight H. Murray of Napa, Calif., immediate past president of the Association. Contributions to the American Medical Education Foundation, for financial aid to the nation's medical schools, were presented by four state medical societies: California, $143,043.26; Utah, $10,390; New Jersey, $10,000, and Arizona, $8,040. The Interstate Post Graduate Medical Association of North America gave $1,000, and the Illinois State Medical Society announced that it was adding $10,000 to the $170,450 presented at the New York meeting last June.

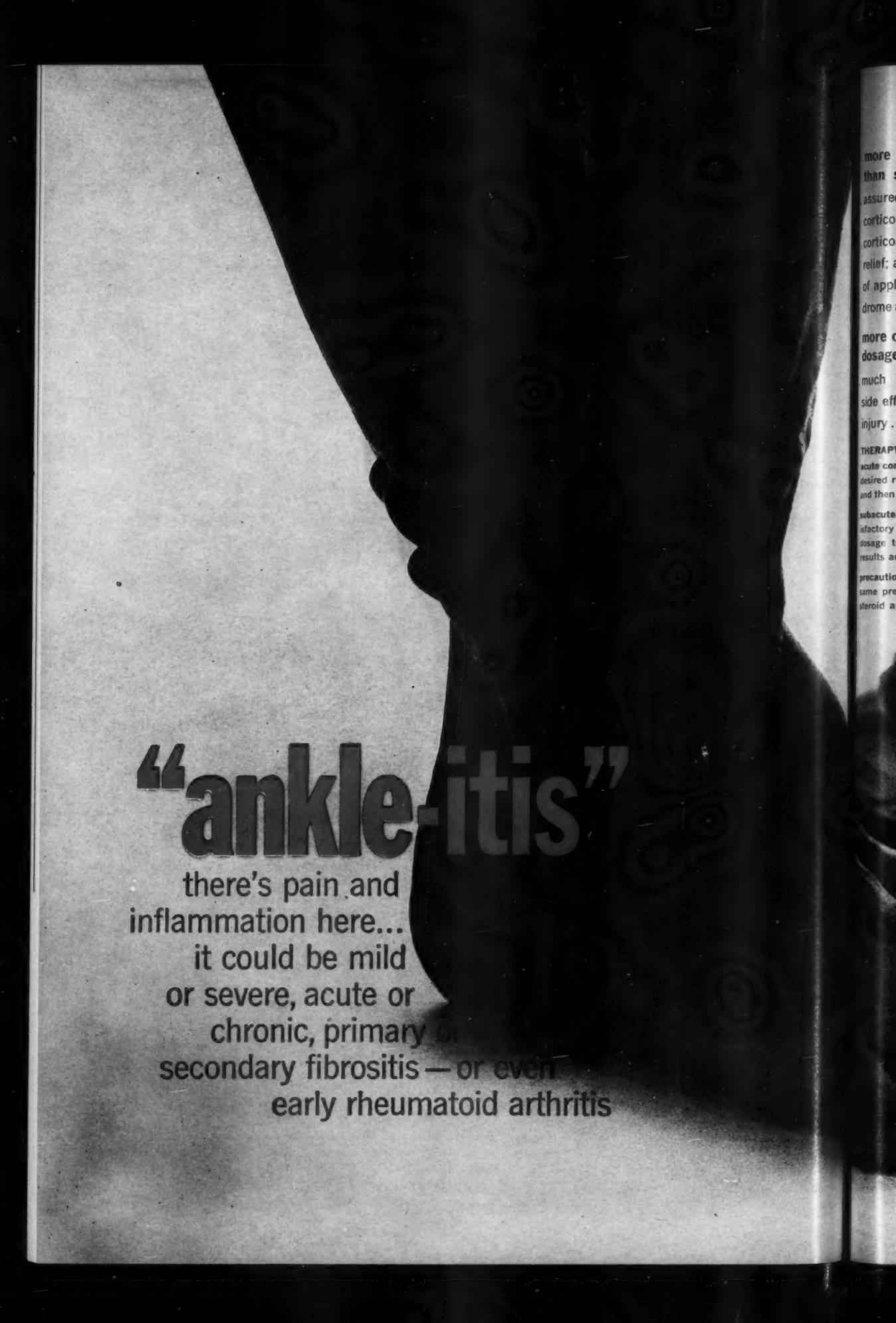
A more detailed report on all actions taken will appear in subsequent issues of the Journal of the American Medical Association.

Your Delegate and our executive secretary, Mr. Robert Carpenter, attended all of the meetings of the house and many of the sessions of the reference committees.

JESSE D. HAMER, M.D.,
Delegate and Vice President,
American Medical Association

A.M.E.F. AWARD TO DR. JESSE HAMER FOR ARIZONA MEDICAL ASS'N.

The nation's medical schools gained almost $200,000 recently when four state medical societies presented checks to Dr. Louis H. Bauer, president of the American Medical Education Foundation before the house of delegates in the Bellevue Stratford. Here Dr. Bauer (left) accepted a check for $8,040 from Dr. Jesse D. Hamer, AMA vice president, on behalf of the Arizona Medical Association.


"ankle-itis"
there's pain and
inflammation here...
it could be mild
or severe, acute or
chronic, primary
secondary fibrositis—or even
early rheumatoid arthritis

more potent and comprehensive treatment than salicylate alone

assured anti-inflammatory effect of low-dosage corticosteroid[1] . . . additive antirheumatic action of corticosteroid plus salicylate[2-5] brings rapid pain relief; aids restoration of function . . . wide range of application including the entire fibrositis syndrome as well as early or mild rheumatoid arthritis

more conservative and manageable than full-dosage corticosteroid therapy—

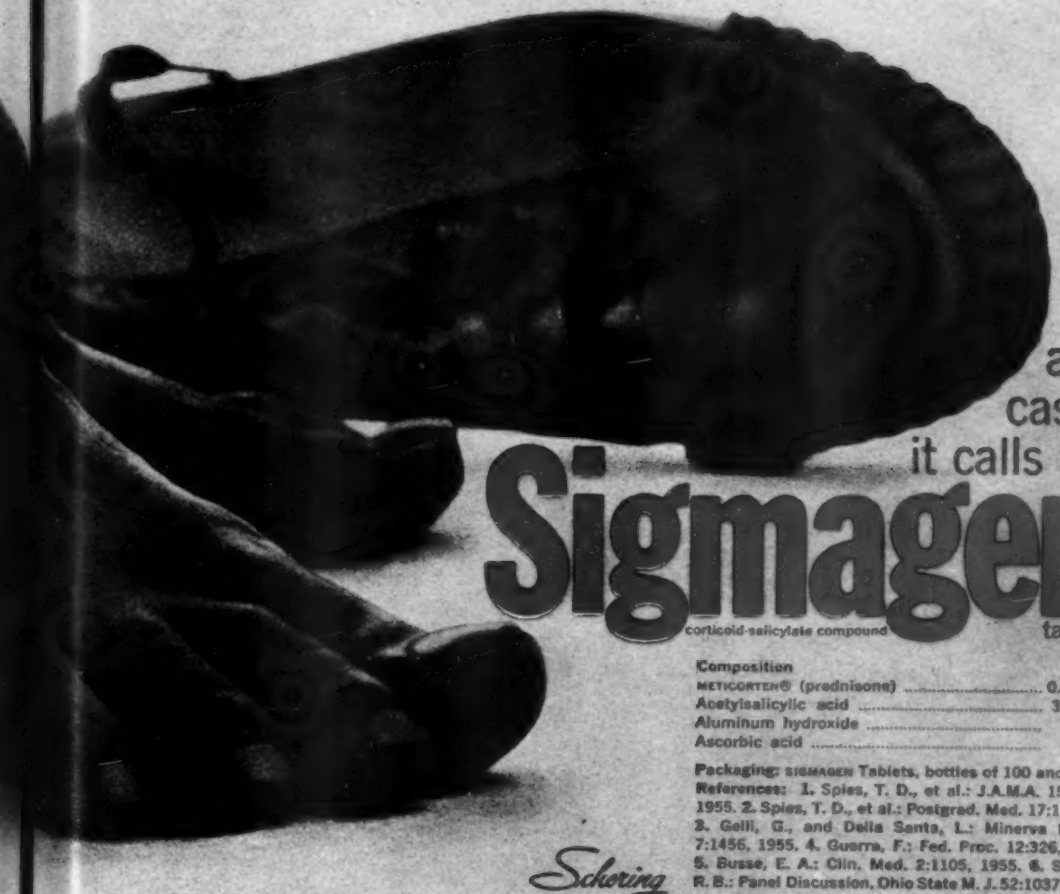
much less likelihood of treatment-interrupting side effects[1-6] . . . reduces possibility of residual injury . . . simple, flexible dosage schedule

THERAPY SHOULD BE INDIVIDUALIZED

acute conditions: Two or three tablets four times daily. After desired response is obtained, gradually reduce daily dosage and then discontinue.

subacute or chronic conditions: Initially as above. When satisfactory control is obtained, gradually reduce the daily dosage to minimum effective maintenance level. For best results administer after meals and at bedtime.

precautions: Because SIGMAGEN contains prednisone, the same precautions and contraindications observed with this steroid apply also to the use of SIGMAGEN.



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Sigmagen®

corticoid-salicylate compound

tablets

Composition

METICORTEN® (prednisone)	0.75 mg.
Acetylsalicylic acid	325 mg.
Aluminum hydroxide	75 mg.
Ascorbic acid	20 mg.

Packaging: SIGMAGEN Tablets, bottles of 100 and 1000.

References: 1. Spies, T. D., et al.: J.A.M.A. 159:645, 1955. 2. Spies, T. D., et al.: Postgrad. Med. 17:1, 1955. 3. Gelli, G., and Della Santa, L.: Minerva Pediat. 7:1456, 1955. 4. Guerra, F.: Fed. Proc. 12:326, 1953. 5. Busse, E. A.: Clin. Med. 2:1105, 1955. 6. Sticker, R. B.: Panel Discussion, Ohio State M. J. 52:1037, 1956.

50-J-610

Schering

FEE AND CONTRACTURAL MEDICINE COMMITTEE

MEETING of the fee and contractural medicine committee of the Arizona Medical Association, Inc., held Jan. 5, 1958. Hayes W. Caldwell, M.D., chairman, presiding.

ROLL CALL

PRESENT: Drs. Beaton, Lindsay E.; Brewer, W. Albert; Caldwell, Hayes W.; Chairman, Craig, Carlos C.; President, Edel, Frank W.; Findlay, Francis M.; Jarrett, Paul B.; Steen, William B.; Warrenburg, Clarence B.; Messrs. Boykin, Paul; Carpenter, Robert; Executive Secretary.

EXCUSED: Drs. Barfoot, G. Robert; Smith, Leslie B., Secretary.

GUESTS: Drs. Dudley, Arthur V. (Tucson); Heim, Delmer J., Secretary Pima Society (Tucson); Limbacher, Henry P. (Tucson); Tanz, Stanley S. (Tucson); Thompson, Hugh C. (Tucson); Van Ravenswaay, Arie C. (Tucson); Messrs. Russell, Dick (Local Agent), Todd, Frank (District Agent)—Pacific Mutual Life Insurance Company.

GROUP HEALTH PLAN

On invitation of the chairman, Frank Todd, district agent of Pacific Mutual Life Insurance Company and their local (Phoenix) agent were in attendance. Mr. Todd briefed the committee on the operations of the Physicians' Health Plan in Long Beach, Calif. It is a no-income-ceiling group plan keyed, in medical and surgical fees, to the cost-of-living index (Bureau of Labor Statistics). The basic fee schedule conforms to the "Relative Value Schedule" of the California Medical Association using currently a $5 unit value. The cost-of-living index operates on a differential of 5 per cent up or down. Groups of 10 or more employes are eligible, requiring 75 per cent enrollment and the insurance plan is designed for the average income class of people today. Pacific Mutual is the co-operating insurance carrier. Other insurance companies especially interested in the field of coverage includes Occidental and Prudential. The Health Insurance Council is promoting discussion of such plans which have become of particular interest in the West because of high medical costs. Premiums are likewise adjusted on the cost-of-living index. The group plan has a $50 deductible clause (which feature is considered very important to the success of the plan), together with an 80 per cent co-insurance factor (plans range from 75 per cent to 80 per cent) with a lifetime maximum coverage of $5,000 to $10,000 (varying plans), designed particularly to cover the catastrophic type of illnesses. When such maximum coverage has been expended, negotiations for such comprehensive re-insurance may be initiated by the insured.

The Long Beach plan has been in operation for approximately one and one-half years with about 90 per cent physician participation; the physicians can fix their own fees under the relative value schedule without anw dictation from the insurance carrier (there must be agreement between the physician and patient); and the physicians are free to and do initiate actions in the interest of the plan and benefit of the patients.

Considerable discussion ensued. Members expressed the view that the possibilities for initiating such a plan for Arizona should be further explored, and Mr. Todd for Pacific Mutual indicated his company would be happy to co-operate with the association to this end.

PANEL PRACTICE OF MEDICINE IN ARIZONA

The meeting was then opened to discussion regarding panel practice of medicine in Arizona, which problem was precipitated by recent actions of the Argonaut Insurance Company involving employes of the Hughes Aircraft Company and members of the Pima County Medical Society in Tucson.

On invitation of the chairman, Doctors Dudley, Heim, Limbacher, Tanz, Thompson (Hugh) and Van Ravenswaay (all of Tucson) were heard from, following briefing of the situation by Doctor Beaton. Each expressed his views openly and frankly and contributed much to the discussion.

It was moved by Doctor Beaton, seconded by Doctor Edel, and unanimously carried, that the committee on fee and contractual medicine of the Arizona Medical Association, Inc., recommends to the council of the Arizona Medical Association, Inc., that it ratify the Resolution passed by the house of delegates of the American Medical Association in session in Philadelphia, Pa., in December 1957, to the effect that

the 1927 opinion of the judicial council of the American Medical Association was reaffirmed with regard to conditions of contract practice, namely: that "there are many conditions under which contract practice is not only legitimate and ethical, but in fact the only way in which competent medical service can be provided," but that contract practice of medicine would be determined to be unethical if "a reasonable degree of free choice of physician is denied those cared for in a community where other competent physicians are readily available."

It was moved by Doctor Beaton, seconded by Doctor Edel and unanimously carried that it be the further recommendation of the committee on fee and contractual medicine to the council of the Arizona Medical Association, Inc., that the physicians throughout Arizona be apprised that in accordance with this principle of medical ethics, they not join any medical program which excludes the other members of the local county medical society from seeing the patients employed by any given employer.

LESLIE B. SMITH, M.D.,
Secretary
by
ROBERT CARPENTER,
Executive Secretary

REPORT ON MEDICARE CONFERENCE

IN THE North Garden Room of the Bellevue-Stratford Hotel in Philadelphia on Friday morning, Dec. 6, 1957, at 9 o'clock convened the conference on Medicare of constituent state and territorial medical association representatives, sponsored by the AMA Board of Trustees Task Force on Dependent Medical Care, Edwin S. Hamilton, M.D., chairman, presiding.

The meeting was well attended with representation from practically every state and several territories, and while the final registration figure was not readily available, it was estimated it would exceed 115. Most of us met in anticipation of an exchange of practical experience among the states in the management of the Medicare program which might be helpful to each as we approach contract renegotiation. It very early became apparent that this was not the purpose of the meeting.

At the very start of the meeting the presiding officer, following words of greetings, called attention to the heavy agenda before the body and the fact that the meeting must be concluded by 12 noon in order to accommodate transportation schedules. To some of us it was an indication that the meeting was called of necessity, so let's get it over with in the shortest possible time.

Hugh H. Hussey Jr., M.D., chairman of a special committee of the task force, then was given the floor and he reviewed the activities of his committee through the early stages of negotiations with the department of defense up to the time of activation of the Medicare program by the states and those more limited to date.

Col. Earl C. Lowry, MC, representing the Office for Dependent Medical Care, was then given the floor, followed by Lt. Col. Ralph J. Richards Jr., MSC, each presenting a glowing report of the results of the first year's experiences with few exceptions. A few follow:

Hospital claims paid to date: 198,235 for a total of $20,895,467, averaging $105 each for an average stay of 5.3 days.

Physicians claims paid to date: 316,682 for a total cost of $22,745,606, averaging $71 each.

Services participation, with the air force leading, amounted to 40 per cent; followed by the navy, 32 per cent; the army 26 per cent; and the public health service, 2 per cent.

Processing of case costs ranged from $1 to $11.42 and as the result, a maximum ceiling of $3 has been established. Colonel Richards pointed out that if anyone cannot stay within this maximum, it would be necessary to locate a new fiscal administrator. I think this is an important observation. While such action in the eyes of the military might be justified under the circumstances, further government regulation might well follow as to fees, though when the question was put as to such possibility, the army representatives emphatically denied there was any such thought (at least for the present). Currently, they take the position that it would be impossible to administer a uniform fee schedule. This will bear watching as Colonel Richards made the point their studies and evaluations are being continued, and while some have contended the military can do it better and less expensively, no major changes are contem-

plated for the immediate future. "Free choice of physician" appears to be the battle cry of attraction and on this point, at least, the dependents appear to be well satisfied.

Ohio was then accorded the privilege of the floor and reiterated its position that it continues to maintain the principles of (a) free choice of physician (which all others similarly do); (b) that only the physician has the right to fix his own fees (the army pointing out that those physicians in Ohio participating in the Medicare program are bound by and following its maximum fee schedule); and (c) that the society cannot contract for its physicians and has not signed a contract and apparently will continue to refuse such negotiation. Ohio now has the distinction of being one of two states (Rhode Island being the other) that has not signed a contract.

It is interesting to note that under such circumstances, the army must act in adjudication of its (Ohio) cases, and while many of us quickly saw a financial advantage should the army handle all adjudication cases, Colonel Lowry rose and pleaded with the states not to demand this, indicating that such task would be unbearable and that the states are doing such a wonderful job now in handling these problems.

Georgia then demanded the floor and in the brief period allotted it, hurriedly reviewed the results of its recently completed survey among the individual states as pertains to Medicare. We expect we shall receive a copy and, of course, want one. A point well made by Georgia was that the purpose of its survey was to try and learn the experiences of other constituent societies as pertains to the administration of the Medicare program, as it was obvious no one on the national level apparently was interested or planning such interchange of information which could be of such substantial help and benefit to each. Some of the statistics reported indicated clearly that the states were not all treated uniformly insofar as special concessions are concerned.

At this point, with very little time left, the meeting was open for discussion from the floor and certain of the questions put by the representatives were selected and then read. Arizona's question was either not considered important, or discarded for lack of time, as were many others. It pertained to administrative cost outlay by the association, not the fiscal administrator, including those expenses required for the adjudication of cases. Other questions were readily available, time permitting. I might add that in discussing this problem with Colonel Lowry after the meeting, he indicated that this question was giving many associations concern, that they appreciated the problem and hoped to come up with some uniform regulation to meet the situation.

The auditing problem was generally revolting to everyone, and the army pleaded with the group to understand government regulations, assuring the gathering that some changes could be anticipated.

It was reported that a considerably large number of states will demand an "indemnity plan" program on renegotiation; further, that the administration of the plans under Mutual of Omaha on a cost per claim basis was very gratifying to the army being low over Blue Cross-Blue Shield and direct association management. As food for thought, with the establishment of a $3 maximum per claim service charge, could the next step be selection by the army of a national carrier as fiscal administrator?

In conclusion, might I say that this meeting was a great disappointment to most of us in attendance. I was reminded of the experiences reported by our Doctors Edel and Sanger who attended possibly a similar meeting in Denver in 1956, held by the AMA task force. This current meeting was well arranged with ample time given the military to present their report, but with little regard to the interests of those of the constituent bodies whose task it befalls to make the program work. What most of those in attendance wanted was a free exchange of actual experience in the field of Medicare operations, and I am inclined to believe that this could only be achieved without military representation and with sufficient time to make such efforts worthwhile and constructive. It is obvious to me that the military does not wish such free debate. On the other side, it is difficult to conceive why our own national organization does not see the need therefor, nor have the inclination to be of such service to its constituent bodies. I am not alone in this viewpoint. This thought was commonly expressed by many of those in attendance following the conclusion of the meeting. Without such opportunity, I can only say

that it behooves all of us to consider very carefully our individual programs before renegotiation, determine exactly what is wanted in the best interest of medicine and the people of Arizona, and then stand firm upon our demands. Those states who have asserted themselves obviously have been given special consideration. Those who are satisfied to subsidize this government medicine program, I feel certain, will receive no objection from the department of defense through the department of the army.

ROBERT CARPENTER
Executive Secretary
Arizona Medical Association, Inc.

CHANGES AND CLARIFICATIONS IN MEDICARE REGULATIONS

OFFICE for Dependents' Medical Care has made several changes and clarifications in regulations governing Medicare, including:

1. From now on the dependent who is returned to a civilian hospital for a second visit will pay $1.75 per day (current per diem), instead of again paying the first $25 of costs. However, this will apply only if the readmission is within 14 days and is for the same condition as the first admission, or a direct complication thereof.

2. "Ward care" is for the first time identified as care in a room containing more than four beds. The new regulation has this to say about ward accommodations:

"Ward facilities may be used for pediatric cases whenever this is the normal medical practice. Further, when the attending physician admits his patient to a hospital in which all semi-private accommodations are occupied, care furnished therein shall be considered as authorized care, but the patient should be transferred to a semi-private accommodation as soon as possible. Finally, when the patient is admitted to an otherwise eligible institution which furnished only ward accommodations, care furnished therein shall be considered authorized care."

3. When a dependent is admitted to a hospital having only private rooms, under the new regulations the government will pay 90 per cent of the daily hospital charges, or $15 per day, whichever is the lesser amount. In such cases, the dependent will pay as usual the first $25, or the per diem charge, whichever is the greater, and in addition, the remainder of the charge for the private room.

MEDICARE POLICY ON ACUTE MENTAL DISORDERS RESTATED

OFFICE for Dependents' Medical Care restates in a policy declaration that the government will pay civilian physicians and civilian hospitals for up to 21 days of hospitalization for treatment of acute mental and nervous disorders. An acute case is defined as constituting "an emergency requiring hospitalization for the life, health or well-being of the patient regardless of psychiatric diagnosis." ODMC says extensions beyond 21 days for short periods may be considered when (1) there is necessity for more time for the sponsor to assume responsibility, (2) retention in the hospital for two or three weeks will result in cure or remission permitting the patient to return home, or (3) underlying diagnosis for determining length of care can't be made in 21 days.

ROENTGEN DIAGNOSIS OF ABDOMINAL TUMORS IN CHILDHOOD

by **Charles M. Nice, Jr.**, M.D., **Alexander R. Margulis**, M.D., and **Leo G. Rigler**, M.D. 75 pages. Illustrated. (1957) Thomas. $4.

This monograph has the great virtue of brevity. The roentgen diagnosis of certain abdominal masses in childhood is well outlined. The method of presentation might be a little more systematic, and there might be additional material on differential diagnosis. In the next edition the authors will undoubtedly stress the importance of gonadal protection in the examination of infants and children. They are all on the staff of the University of Minnesota Department of Radiology, and very competent in their field.

Stacey's Medical Books, San Francisco, California.

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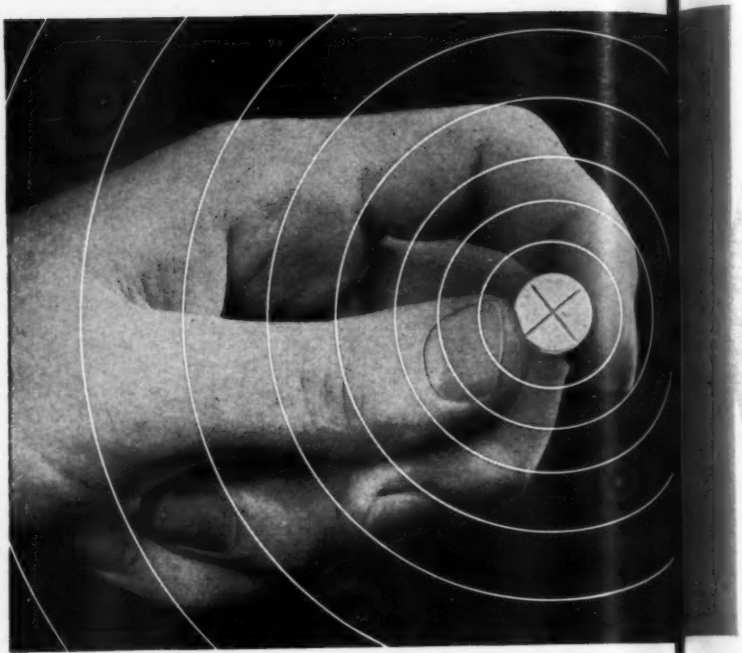

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New authoritative studies show that KYNEX dosage can be reduced even further than that recommended earlier.[1] Now, clinical evidence has established that a single (0.5 Gm.) tablet maintains therapeutic blood levels extending beyond 24 hours. Still more proof that KYNEX stands alone in sulfa performance—

- Lowest Oral Dose In Sulfa History—0.5 Gm. (1 tablet) daily in the usual patient for maintenance of therapeutic blood levels
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- Effective Antibacterial Range—exceptional effectiveness in urinary tract infections
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NEW DOSAGE

The recommended adult dose is 1 Gm. (2 tablets or 4 teaspoonfuls of syrup) the first day, followed by 0.5 Gm. (1 tablet or 2 teaspoonfuls of syrup) every day thereafter, or 1 Gm. every other day for mild to moderate infections. In severe infections where prompt, high blood levels are indicated, the initial dose should be 2 Gm. followed by 0.5 Gm. every 24 hours. Dosage in children, according to weight; i.e., a 40 lb. child should receive ¼ of the adult dosage. It is recommended that these dosages not be exceeded.

Tablets:
Each tablet contains 0.5 Gm. (7½ grains) of sulfamethoxypyridazine. Bottles of 24 and 100 tablets.

Syrup:
Each teaspoonful (5 cc.) of caramel-flavored syrup contains 250 mg. of sulfamethoxypyridazine. Bottle of 4 fl. oz.

[1] Nichols, R. L. and Finland, M.: J. Clin. Med. 49:410, 1957.

LEDERLE LABORATORIES DIVISION, AMERICAN CYANAMID COMPANY, PEARL RIVER, NEW YORK

*Reg. U. S. Pat. Off.

ARIZONA POISONING CONTROL INFORMATION CENTER

University of Arizona, Tucson, Arizona

1957 Summary Report

THROUGH the co-operative efforts of members of the health professions in Arizona and of their auxiliaries, of the Tucson Women's Club and of the Board of Regents of the University and State Colleges of Arizona, a state poisoning control program was planned in April 1957. The Tucson Medical Center and the University of Arizona Poison Control Information Center initiated a "pilot program" in June and support from state funds was obtained in September to facilitate the enlargement of the service to include a network of poison control centers in 15 additional hospitals in Arizona. The Tucson Women's Club and the Auxiliary of the Arizona Pharmaceutical Association conducted public education programs among clubs and PTAs for prevention of accidental poisoning in the home.

While it was originally hoped that the statewide network would be equipped with duplicates of the Poison Control Information Center files by the first of January 1958, it soon became apparent to members of the Arizona Medical Association's committee on poison control and their consultants that the nucleus file obtained from outside of Arizona was replete with imperfections of a typographical or clerical nature which required detailed checking with the original, authoritative sources of the toxicological data. As a result, the new target date for distribution of the files, involving over 40,000 information cards, was set for March 1958.

In order to improve the handling of poisoning cases in the period until the files are available, the poisoning control committee recommends the acquisition of a library of useful references to be housed in the hospital emergency ward for the use of those immediately concerned with the poisoning victim.

ESSENTIAL:

1. *Clinical Toxicology of Commercial Products,* by Gleason Gosselin, and Hodge. Williams and Wilkins Publ., Co., Baltimore, 1957.

2. *Handbook of Poisons,* by Dreisbach. Lange Medical Publications, Los Altos, Calif., 1955.

OPTIONAL:

1. *Accidental Poisoning in Childhood,* by Edward Press, M.D. of American Academy of Pediatrics. Chas. C. Thomas, Publ., Springfield, Ill., 1956.

2. *Poisoning,* by Van Oettingen. Paul Hoeber Publ. Co., Div. of Harper Brothers, N. Y., 1952.

3. *The Pharmacological Basis of Therapeutics,* 2nd Ed., by Gordon and Gilman; Macmillan Publ. Co., New York, 1956.

A list of antidote reagents and materials indicated in the treatment of poisonings by the information center files will be distributed shortly before the files are completed in order that the treatment centers may be prepared to make the best use of them.

As the files are nearing completion, it is extremely important that poisoning case reports from physicians throughout the state be received for checking the adequacy of coverage of the files. Therefore, an urgent plea is made to all Arizona physicians at this time for submission of reports on the forms supplied in June for this purpose.

The number of cases reported to the University of Arizona Poisoning Control Information Center from June 1, 1957 to the end of the year total 272. These are summarized as follows:

	PER CENT
AGE:	
Under five	74.0
Six to 16	4.0
16 to 30	10.8
31 to 45	4.8
Over 45	3.5
Unknown	2.9
NATURE OF INCIDENT:	
Accidental	90.9
Intentional	7.4
Unknown	1.7
OUTCOME:	
Recovered	97.8
Fatal	16.
Unknown	.6
TIME OF DAY:	
Between 6 a.m. and noon	34.5
Between noon and 6 p.m.	38.6
Between 6 p.m. and midnight	21.8
Between midnight and 6 a.m.	1.8
Unknown	3.3
CAUSATIVE AGENTS:	
Aspirin preparations	27.0
Insecticides	12.7
Solvents (kerosene, charcoal lighter, etc.)	8.6
Sedative preparations	8.4

Bites (dog, scorpion, spider and gila monster)	5.1
Hormones and derivatives	2.6
Household bleaches	2.5
Ornamental plants (castor, oleander, bird of paradise)	1.6
Laxatives	1.5
Tranquilizers	1.3
Miscellaneous including: air deodorants, alkalies, antihistamines, cosmetics, crayons, disinfectants, food poisonings, hair dyes, moth balls, nose drops, pain relieving preparations, plastic cements, sympatholytic agents, waxes	28.7 per cent

Arizona Medical Association Poisoning Control Committee

Virginia Cobb., M.D., 2414 E. Elm St., Tucson, Chairman

Paul B. Jarrett, M.D., 2021 North Central Ave., Phoenix

Maurice Rosenthal, M.D., Diagnostic Laboratories, Phoenix

Martin S. Withers, M.D., 1811 E. Speedway, Tucson

Consultants to the Committee

Albert L. Picchioni, Ph.D., Division of Pharmacology, Pharmacy College, University of Tucson

Willis R. Brewer, Ph. D., Dean, Pharmacy College, University of Arizona, Tucson

MENTAL RETARDATION: PARENTS, COMMUNITY, PROFESSION

By Clarence G. Salsbury, M.D.,
Commissioner of Public Health

IN MANY instances, diagnosis of mental retardation requires considerably more than an IQ test. The child who isn't making normal mental progress because of a physical defect or an emotional imbalance may not be able or even willing to respond to mental testing, regardless of his mental ability. Institutions for mentally retarded children all over the country have this problem. They must determine whether referrals are primarily emotionally retarded, or primarily mentally retarded.

It has been the objective of the Arizona State Department of Health to demonstrate a diagnostic service for mental retardation which will meet the major need of parents and the community. This demonstration has been accomplished in Maricopa County at the Child Development Center, 1633-A West Jefferson Street, Phoenix. When a diagnosis of mental retardation is made here, the conclusion is arrived at by a team of specialists — a social worker, a psychologist, a medical clinician, special diagnostic consultants, clinical laboratory services, and in some instances, an educationist. In this way, the parent and the referring agent receive one opinion which is determined at the time of a case conference. As a result of this team consensus, in the majority of studies made, the parents have accepted with confidence the findings and the recommendations of the diagnostic team. In many previous instances, parents have become discouraged with a variety of referrals and findings made concerning their child. Family physicians have referred them to a number of diagnosticians, including the neurologist, the psychiatrist, the psychologist, and the hearing and speech specialist. Many different diagnoses may thus be given to the parents and confusion is a fairly common consequence.

Sometimes the family physician recommends that mentally retarded children be institutionalized. This recommendation isn't always acceptable to a parent. Anxious parents are often encouraged by a retardate's ability to memorize. The hope that their child isn't retarded then becomes a strong force for parents to reject a diagnosis of mental deficiency.

To institutionalize a loved child, educable and possibly (?) mislabeled a mental retardate, is more than many parents can accept.

To accept in despair a recommendation of institutionalization has created considerable guilt or unhappiness in some parents. A conflict results, and in the case where the child has been institutionalized, it results, in many instances, in the retardate returning to the home. This can be costly, both financially and emotionally to all persons concerned. Mentally retarded children usually prefer the status quo.

There are many resources within the community which make possible the usefulness of the mentally retarded child who is educable or who is trainable. The family and parent

groups constitute a major resource in promoting the child's growth and development. The educationist can be most useful to the parent in the instance of the small retardate. Nursery schools, church schools and recreation activities geared to the mental ability of the child are rapidly developing resources in many communities. Public education is beginning to realize the potentialities of the educable mentally retarded. Vocational rehabilitation is becoming a major resource for the mental retardates, those 16 years of age and over.

Throughout the years of the mentally retarded child's physical growth, the family physician and the public health department, in cooperation with the educationist, constitute a community team essential to the community understanding of the mentally retarded child. They are also essential to his continuous health supervision and conservation, and essential to the morale of the parents and the emotional support of the entire family in adjusting to the mentally retarded child in the home and in the community.

In addition to the rapidly developing special resources, there are the usual resources common to all citizens. It is even possible that these somewhat mentally deficient people, who constitute a minority that has been kept out of focus, may become better understood and better accepted in the community of men than have other minority groups.

OPTOMETRY

By A. K. Hansen, M.D.

PERHAPS few of us are aware of the mounting danger that confronts public health and welfare by the recurrent efforts of certain segments of optometry to invade the practice of medicine and even to curtail by legislation the practice of medicine, particularly ophthalmology.

In recent years certain influential groups in optometry have made forcible attempts to enter into the field of medicine by initiating legislative action in several states which would give legal sanction to diagnose and treat ocular disease and to perform ocular surgery. In addition, there have been efforts to curtail the medical profession and prevent it from prescribing glasses or even doing refractions. Apart from these legislative efforts, there are indications in many states that a significant number of optometrists are already treating eye diseases such as strabismus, removal of foreign bodies, etc. It is becoming increasingly common for the optometrist to diagnose eye disease, to evaluate the seriousness of the patient's situation and then either to manage the case medically or assume the responsibility as to if and when an ophthalmologist should be consulted.

In Arizona, an individual with subnormal vision who applies for a driver's license is requested to have a questionnaire completed regarding his or her ocular status. In addition to providing a space for recording the vision with and without proper corrective lenses, there is a space provided for the diagnosis of any abnormalities of the eyes. This slip of paper can be signed by either an optometrist or an ophthalmologist.

The consequence of these many practices is obvious in the case of an individual with progressive loss of vision. If the optometrists are being taught that they are trained to evaluate and possibly treat ocular diseases, we in the medical profession should begin to show concern over the welfare of the American people.

The house of delegates of the American Medical Association has been aware of this problem for some time and at a meeting in June 1955 passed a resolution (No. 78) which in effect dissolved the National Committee on Eye Care (formerly the Inter-Professional Committee on Eye Care) and requested that "various state medical and ophthalmologic organizations be vigorously supported by the American Medical Association in their unremitting opposition to further encroachment on the field of medicine by optometry or any other nonmedical group." In addition, they appointed a new and permanent committee on medical eye care to solve the many problems which will arise from this situation in the future. This problem is well discussed in a pamphlet published by the National Medical Foundation for Eye Care, 250 West 52nd St., New York 19, N. Y. Copies may be obtained by dropping them a card.

STANFORD BLUE SHIELD ANALYSIS INDICATES ARIZONA PLAN MEETING PHYSICIAN OBJECTIVES

By Virgil A. Toland, M.D., President
Arizona Blue Shield Medical Service

IN PRESENTING an objective analysis and evaluation of the specific comments made by participating physicians replying to the Stanford Research Institute questionnaire relative to the operations of Blue Shield in Arizona, it should be recalled that only 35.4 per cent of the questionnaires were returned with comments. The majority of these were concerned only with procedural changes in the Blue Shield program. Only 20 replies could be classified as disapproving Blue Shield either in principal or in action.

It is also significant that only one of the adverse comments reflected on the management or actual operations of Arizona Blue Shield. The others objected to the principle, to the doctors being in the "insurance business," or to being regemented or subsidized. A collation of all the comments made by participating physicians clearly indicated that most of those replying were concerned primarily with four factors:

1. Broadening the benefits of Blue Shield.
2. Revising the present fee schedules in whole or in part.
3. Altering or abolishing the service benefits principle; and
4. Simplifying and strengthening administrative operations with greater emphasis on improved promotion and selling to meet commercial competition.

A discouraging number of comments, however were the result of either obvious misunderstandings of the operations of Blue Shield, or failure to consult the participating physician's manual. Many of the communications sent by the plan were either unread or failed to make their points sufficiently clear enough to be understood. To improve this situation is one of the goals of the newly activated professional relations program.

It is clear that many physicians want Blue Shield to extend present benefits to include services not now covered, or which, for practical reasons, are limited in present contracts. These include extended out-patient care, diagnostic procedures, psychiatry, catastrophic and chronic illnesses. As might be expected, quite a number of physicians want an increase in the present limited obstetrical benefits in Blue Shield contracts. Several others indicated a desire for extending present limited coverage for in-hospital medical and pediatric services.

There can be little doubt that extension of benefits in some or all of these fields would be desirable, but the realities of the situation in which an already high dues structure would have to be further raised for the lowest income groups are all too evident. On the other hand, the Blue Shield board and staff are well aware of the need for flexibility and very positive steps have been taken to extend coverage. In-office surgery, in-hospital medical coverage, the new diagnostic radiology and pathology endorsement, and the new Series "60" and "80" programs, are all recent steps taken to provide broader coverage without pricing Blue Shield coverage beyond the capacity of the lower and middle income subscribers. Other proposals are now under consideration which would continue this trend.

Probably the most pointed criticisms were directed at the purported inadequacy of the present basic and preferred contract fee schedules and at the principle of fixed fee schedules in general. Such criticism came from a surprisingly small percentage of participating physicians, and most of these overlooked the basic fact that such schedules were fashioned by the medical profession in Arizona to take care of the very significant percentage of Arizonans who are still in the lower income groups. A careful reading of these critical viewpoints indicated that there was a large emotional element behind them with very few practical suggestions that could be implemented without serious harm to the Arizona plan.

With reference to the fee schedules, however, the Blue Shield board, professional committee, and administrative staff have just completed a review of the existing schedules and, together with the new Blue Shield Series "60" and "80" schedules, distributed new schedules to all participating physicians. Working almost weekly with the professional committee and the subcommittee on fees, very positive steps were taken to alleviate obvious inequities and omissions in the present schedules. Consultations with representatives of the various specialties, as well as with physicians in general practice, resulted in the suggested changes in the basic and preferred schedules which were unanimous-

ly adopted by the professional committee and approved by the board of directors on Oct. 20, 1957. A careful check of the benefit schedules of other plans indicates that the Series "60" and "80" are probably the highest provided by any of the 74 Blue Shield plans.

The continuing study of the fee schedules by the professional committee and the plan staff assures all participating physicians that rigidity will not supplant the flexibility, reasonableness and professional approach required to solve this endless problem. That this well-established and almost routine program has been generally successful to date is proved by the statewide acceptance of both the principle and the specific fee schedules by the overwhelming majority of participating physicians.

Only the allied subject of service benefits approached that of fee schedules as the subject of criticism of those physicians who were critical of Blue Shield. There are those very, very few doctors who opposed the service benefits principle entirely. To these no defense will be satisfactory, but our professional relations program may help to place before them the facts concerning this subject. President-elect Dr. Noel Smith and the professional relations director have already undertaken a series of statewide meetings with physicians, and the service benefits feature of Blue Shield are highlighted in Dr. Smith's address, "The Phililoo Bird."

Secondly, there were those who felt that there was a broad or large-scale abuse of the income level factors upon which service benefits are based. Overlooked was the fact that the Stanford Research Institute reported that while 57 per cent of the population in Arizona have incomes entitling them to full coverage under Arizona Blue Siield, only $79,000 (out of a total of $859,614) had been paid participating physicians for services rendered under-income subscribers during 1955. It would appear, therefore, that the abuse, if any, was relatively small in the overall picture of Blue Shield operations.

Even here, however, the plan offers a 24-hour positive approach to the problem for the participating physician. All he has to do when he submits his services form is to inform the plan that in his belief a specific subscriber is understating his income. A quick, confidential and detailed credit bureau check will be made and the result reported promptly to the participating physician. Significantly, however, very few actual cases of cheating have been found, although scores of cases have been checked.

Thirdly, there were those physicians who thought that the service benefits principle should be tempered by developing broad co-insurance, deductible or indemnity provisions for all contracts. Individual as well as collective analysis of these suggestions indicated nothing new in these proposals. Recent surveys (national as well as local) have shown that such programs are actively resisted by the subscribed, by labor — organized and unorganized — and even by important segments of top management in industry. So pronounced has this resistance become that some of the largest and most conservative commercial insurance companies are reducing or eliminating co-insurance or deductible provisions from new and old contracts alike. One leading company has now cut its major medical co-insurance provision from a 75-25 to a 95-5 percentage. The indemnity concept in Blue Shield has also suffered during the past 24 months with the introduction or extension of service benefit contracts in many plans.

Again, however, Arizona Blue Shield has taken action to meet the positive suggestions made by participating physicians that more Arizonans should be protected by the service benefits feature while at the same time increasing the fees of the physicians providing such services. The new Series "60" and "80" endorsements protect subscribers with family incomes up to $8,000 a year while providing a fee schedule (based on the California relative value schedule) which many physicians have characterized as "more than liberal."

Lastly, the administration and staff of Blue Shield are directing a stepped-up program of promotion and sales designed to expand coverage throughout the state. This program is double-edged; planned to attract both non-group subscribers while increasing and up-grading group coverage. Despite the strongest and most persistent competition from an ever-increasing number of commercial underwriters, Blue Cross enrollment in 1957 was the highest in its history, and the increase over 1956 the best in recent years.

It is our conclusion, therefore, after a detailed study of the adverse criticisms, as well as of the constructive suggestions made by the participat-

ing physicians who replied to the Stanford Research Institute questionnaire, that positive steps have been taken to keep the plan representative, fair and versatile. That the program and projects now in various stages of planning and implementation not only will meet many of the criticisms, but carry into effect most of the thoughtful, constructive suggestions which were found practical and within the principles established for Arizona Blue Shield by the board of directors and the house of delegates of the Arizona Medical Association.

Organization Page

CIVICS

By Norman A. Ross, M.D.

MY NEW YEAR'S RESOLUTION

WHAT a season of family and social activity, fraternal and religious expression Christmas 1957 was! Aside from my annual pilgrimage to the unmentionable section of a department store, this physician went shopping in a super market. How complete and completely festive it was! It literally bulged with people, carts, and baskets, and stacks and stacks of delicacies.

This home-owned unit lacked neither Christmas carols, decorations, or smiling, though rushed and obviously tired, clerks.

The tangerines were sacked fo rsale. I noted the price, picked up a bag and fell in line. Acknowledging my Merry Christmas, I pocketed my change and accepted as an added token of good will, premium stamps.

My tangerines had been sacked for sale. The sign above them read 29 cents. "A pound" was on that sign. I hadn't seen it. There were over three pounds of tangerines in that bag. Ninety-seven cents was the sale the cashier rang up. Greeen stems, fresh leaves were on each of the large sparkling luscious fruit — on the top layer. The fruit under this layer were wrinkled, dry and spoiled.

A novice, my shopping expert wife called me as she turned the fruit out of the bag.

Remember senior orientation lectures of medical school? I did then. These lectures were to instill the professional attitude in we aspiring doctors. I remembered a story told by a part-time medical educator and a full time medical leader:

"This is the story of the Peruvian match box," he said. "I have here a masterpiece — a box of paper or wood, what matter, with an inscription that to me exemplifies the professional attitude, the attributes of our profession. I read:

'Matches' — This, gentlemen, is a statement of fact.

'Forty or more' — Here is a full measure.

'Hand made' — A guaranteed personal service, with attention to mass and detail."

He continued, "This isn't present business practice. Their's isn't the professional attitude, but such in no wise exempts the professional man."

My New Year's resolution: I wouldn't get so mad at medical shoppers in the future. That shopper might have met an ex-grocery clerk who had graduated to the professions.

* * *

EDUCATION

That new college extension experiment in Yuma can be the beginning of a new and better day in the higher education of the dedicated youth of Arizona. It can affect budget and taxes, too.

This action of the Board of Regents for the University of Arizona and the State Colleges recognizes the high degree of specialization that characterizes the modern American university and college.

It provides for state level responsibility for higher education. It provides for program, for curriculum, for faculty, the choice of, and under the direction of, administrators of our institutions of highest academic accreditation.

This action recognizes family, community, and state economics. It should mean real economies.

Economies affecting the family budget; travel and maintenance of one or more college students away from home isn't a small item.

Community economy; the local butcher, the baker, the clothier, the local garageman enjoy serving the home-town high school graduate.

Economies at our state colleges and university: that 50 per cent student drop-out rate in the freshman year in college, if experienced by the home-town extension college, can prevent some huge dormitory building races.

The major economy of this college extension program will be the saving of student time. This program provides university and college direction throughout the college years. It guarantees credit acceptance.

SOCIAL SECURITY

What is your social security number? How many social security credits have you, doctor?

Hasn't material in your mail recently, (mine was addressed to my home) set you to wondering? Have you asked some one to answer these questions — yet? An employe, maybe? You have them covered, you know.

Who has social security coverage? Our employes of course. Hospital employes, lawyers, dentists, farmers, retired and some disabled Americans, skilled and unskilled laborers — all of these and more participate.

It looks like physicians, some government employes otherwise provided for, and life-long indigents constitute the bulk of those who are not covered.

The anti-participation literature mentioned our grandchildren and a debt our participation in this program would place on them. We've some — about par for physicians — five. We find that we cannot guarantee the political or social thinking of our children.

Will our grandchildren judge our attitude one of professional vanity rather than one of adherence to political principle?

Young physicians — you will pay the most — you should determine our course. As I see it, we older men this once could refrain from voting.

PUBLIC AND GOVERNMENT ARE TAKING SURVEYS SERIOUSLY

From the New York Times, Nov. 18, 1957

PHYSICIANS ARGUE HOSPITAL PROJECT

The Kings County Medical Society last night considered a resolution to disapprove the treatment of private patients in a new hospital to be built at the State University's downstate Medical Center in Brooklyn.

The resolution denied the legal right of the state to build a hospital in which private patients would be treated and stated, as well, that "there is no scarcity of beds in municipal and voluntary hospitals available to the medical college for teaching purposes."

Dr. Robert A. Moore, president of the new medical center, said last night that he disapproved of the society's contemplated action.

"As to the challenged 'legal right' of the state to build a hospital with some beds for private patients," Dr. Moore said he could not understand this point in view of the fact that "nearly all hospitals now were built with federal funds under the Hill-Burton Act."

"As to a shortage of beds," Dr. Moore said that the Greater New York Hospital Council recently said that "some 400 new beds were needed in the Flatbush section of Brooklyn."

PHARMACEUTICAL AWARD TO DR. SOLLMANN

A SCIENTIST who has deliberately shunned the limelight during a 60-year career devoted to teaching and basic laboratory research was honored by the nation's manufacturers of medicines.

Dr. Torald Sollmann, 83, Dean Emeritus of Western Reserve University's School of Medicine in Cleveland, Ohio, received the annual award of the American Pharmaceutical Manufacturers' Association (APMA).

Honored as the "dean of American pharmacology," Dr. Sollmann came to national prominence in 1917 when he published the first textbook on pharmacology in the English language. The book in revised form is still a standard text for medical students.

Francis Brown, president of the organization, declared: "The award committee, in selecting Dr. Sollmann for this year's award, is recognizing a man whose lifetime has been devoted to filling a very serious need of the nation: the training of an ever-growing number of men and women in the sciences.

"He has, through his writings, provided scientific groundwork from which an untold number of major discoveries have sprung. His students have become outstanding figures in industry and education."

Mr. Brown cited Dr. Sollmann's work on the council on pharmacy and chemistry of the American Medical Association. He is a charter and still active member of the council, and has served as chairman for more than 20 years.

Dr. Sollmann has also contributed "unselfishly of his wisdom to the nation's military services, the department of agriculture, and other federal, state and local government agencies," said Mr. Brown, who is also president of the Schering Corporation.

Dr. Sollmann was born in Coburg, Germany, in 1875. He became a naturalized U. S. citizen in 1896 and received his M.D. degree from Western Reserve University the same year. Other degrees include an L.L.D. from Western Reserve University, and an Hon. D.Sc. from Ohio State University.

He has also served as a consultant to the U. S. Public Health Service since 1935; a member of the executive revision committee, U. S. Pharmacopoeia from 1910 to 1930; consultant, U. S. Army, U. S. Navy and U. S. Department of Agriculture, 1902, 1917. He is a Fellow, American Medical Association, and member of many professional organizations.

AMERICAN COLLEGE OF PHYSICIANS

THE AMERICAN College of Physicians named the following physicians as associates of the college at the Nov. 9-10, 1957, meeting of the board of regents at the college headquarters in Philadelphia, Pa.:

Dr. Sharrel Kent Conner
Dr. David Ray Long

AMERICAN COLLEGE OF CHEST PHYSICIANS RESIDENT LOAN FUND

Purpose of Fund:

To stimulate interest in postgraduate study of chest diseases, and to assist worthy postgraduate students in continuation of study in diseases of the chest (including diseases of the heart and lungs).

Rules and Regulations:

Eligibility: Any physician who has completed an internship of one year or more in an acceptable hospital may apply for a loan in order to continue study in the specialty of chest diseases. Such application shall be made on a form furnished by the American College of Chest Physicians.

Amount of loan: The total amount of loan to any one student in any one year shall not exceed $1,000. Except under special circumstances, the loan shall be made on a monthly basis of $80 per month for 11 months and $120 on the 12th month. Not more than $3,000 shall be loaned to any one student.

Repayment of loan: For a period of not more than three years after the date of the first loan advance, neither principal nor interest need be repaid on the loan provided the student shall continue his studies in postgraduate education in diseases of the chest. Should the student, prior to this three-year period, engage in practice or discontinue his studies in diseases of the chest, he shall become obligated to make monthly payment on the loan of interest at the rate of 3 per cent per annum, together with payment of principal in monthly installments in an amount of

not less than 10 per cent of the total loan during the first year, and 20 per cent during the second year and each year thereafter, provided, however, that the resident loan fund committee shall be authorized to modify this schedule both as to principal and interest when circumstances warrant. All monies repaid both as to interest and principal shall be returned to the resident loan fund.

Security: Each loan shall be secured by a note bearing simple interest at the rate of 3 per cent per annum. There shall be provision in the note for repayment as previously specified. Additional security in the form of assignment of life insurance shall be obtained where possible and premiums for this may be paid by the resident loan fund. Premiums shall be added to the loan and constitute an obligation of the borrower, drawing interest at 3 per cent and considered as part of the loan.

Jurisdiction over loans: The resident loan fund committee shall have absolute authority and full responsibility in selection of recipients of all loans, and shall have the responsibility of collecting repayments of loans and interest. All monies however, shall be held in the treasury of the college and such monies as are not required for loans shall be invested by the college. Any interest from such investments shall be added to the resident loan fund.

Perpetuation of the loan fund: In order to serve the purpose of maximum usefulness, the fund should be increased annually. It is recommended that the resident loan fund committee be authorized by the board of regents to solicit donations from the fellows and members of the college for the fund; also from local, state and national tuberculosis and health associations, cancer societies and private lay persons and corporations, and from any other source. Such gifts should be made to the college and earmarked for the resident loan fund so that they may be tax exempt and deductible from federal income tax.

It is also recommended that the college contribute to the fund each year until the fund is well established and adequate to meet the needs and demands of all eligible applicants.

Publicity: The resident loan fund committee shall be authorized to publicize the availability of loans through the college journal and by personal communications with hospitals and medical schools, and other interested persons and organizations. Any costs for such publicity shall be defrayed by the resident loan fund.

M. Jay Flipse, Miami, Fla., Chairman
David A. Cooper, Philadelphia, Pa.
Theodore H. Noehren, Buffalo, N. Y.

HOW U.S. SCHOLARSHIP PROGRAM WOULD AFFECT MEDICAL STUDENTS

PRE-MEDICAL students would be eligible for scholarships under the administration's new program, but with a four-year time limit on the benefits, the students would have to finance most of their medical school education in some other way. This is the way one source in the department of health, education, and welfare said the program would affect medical education:

1. Each year for the next four years the U. S. would provide 10,000 scholarships for bright students, the amount depending on the student's needs. Preference would go to those with good preparation in mathematics and science.

2. Students themselves would decide what college course to pursue; it could be pre-med, or any other.

3. While scholarships generally would not be offered to students in medical school, on graduation they would be eligible for fellowships; these could be of material help in increasing the number of medical school teachers.

The administration also contemplates expanding several National Science Foundation grants and fellowships programs, including one open to medical school graduates; this is pointed toward medical research or careers on medical faculties. NSF's greatest expansion, however, probably will be in summer institutes for high school mathematics and science teachers.

COMMUNITY M.D. AID PROGRAM

The Sears-Roebuck Foundation

EVER since the physician loan program had to be dropped, the foundation has been working on another project in the field of medical distribution.

The current program is aimed at helping communities who have no doctor obtain the services of a doctor. Under this program we recognize that small communities are competing with the city for the services of a physician. To compete successfully, the small community must have something to offer. Thus the new program will stress the building or remodeling of a medical center that is either better or equal to those available in the city.

We have arranged with an architect to provide plans for an economical and functional medical center which is adaptable to local building materials. This building incorporates every modern feature necessary for quality medicine. It is furthermore designed to simplify the actual work load of the help by an efficient office arrangement.

The medical center is designed to provide out-patient service where needed and can be easily expanded from a one to a two-doctor unit. The cost of this building fully equipped except for examining tables, x-ray, and waiting room chairs ranges from $12,000 to $25,000. We are also prepared to provide architectural advice on remodeling if the building is attractive and suitable for such.

The foundation is prepared to provide any community so chosen to participate in this program the following:

1. Assist in conducting an economic survey of the community to see if area can financially support a doctor.

2. Consultation and advice on fund raising and organizing the community.

3. Complete blueprints and building specifications on the medical center or advice on remodeling, depending on which is most feasable.

4. Our services along with the AMA and our medical advisory board to aid in obtaining the doctor.

Communities chosen, to participate must be approved by the state society and be able to raise its own funds. Any community willing to do so, regardless of its proximity to areas or medical need, would qualify under this program.

If you should have any such communities that might be interested, or if you would like more information, please let us know.

NORMAN H. DAVIS,
Director, Medical Program,
The Sears Roebuck Foundation

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45 MEDICAL SCHOOLS TEACH DISASTER MEDICINE

FORTY-FIVE American medical schools are now participating in a special program dealing with the problems of military and disaster medicine.

The program, Medical Education for National Defense (MEND), was started in 1952 with five pilot schools. It has steadily expanded and now includes more than 14,000 medical students in 45 schools. The program has had a far more enthusiastic reception in the medical schools than was expected.

It is serving a very real need; that of preparing medical students for military service and for meeting the medical needs in a disaster. However, it may face elimination within the next year because of the economy wave now being carried out in military establishments.

The cost of the program has been most reasonable, averaging $10,000 per school per year, or about $30 per student. Last year, the total cost, including the operation of a co-ordinator's office in Washington, was $325,000 for 35 schools.

It is difficult to see how a more economical program could be devised to meet what is surely a real need. It may be very difficult to do a similar job at a later date, and in the event of sudden attack, the lives of many people may depend upon the degree of preparation of physicians in this special field of defense medicine.

The program is carried out in medical schools under the supervision of the individual school in whatever manner the faculty sees fit. Annually, MEND sponsors a series of symposiums at federal medical installations. It also conducts a

tour for deans and co-ordinators of MEND-affiliated schools, designed to introduce them to current problems and trends in the federal services.

Activities in the medical schools include special lectures, conferences, and demonstrations in surgery of trauma, war wounds, radiobiology, defense measures of chemical and biological warfare, aviation medicine, and various other medical civil defense problems.

TOP CIVIL DEFENSE MEDICAL ADVISER PROVIDED

A NEW post of assistant administrator, health and medical affairs, has been created in the Federal Civil Defense Administration. Patterned after a similar office in the defense department, the post was urged by the American Medical Association, American Hospital Association and the Association of State and Territorial Health Officers. These groups suggested the move after a FCDA reorganization which had left medical personnel in the agency without clear authority or channels of communication. FCDA Administrator Leo Hoegh explained that the assistant administrator will serve as his staff advisor on health and medicine in civil defense.

LONG-RANGE MEDICAL CARE PLAN

A NEW concept of total medical care has been developed by the FCDA for use in the wake of an all-out thermonuclear attack on this nation.

It allows for long-time medical treatment for millions of casualties in addition to providing medical care for the normal number of sick among the survivors of any enemy attack. Such care would be provided for a period as long as one year, as contrasted to previous planning which called for a period of only about three weeks.

The new program was developed by a 10-member medical task force committee which drew up a system of emergency medical care, as follows:

1. Emergency Treatment Stations: These would be concerned with first aid and emergency surgery limited to arresting major hemorrhages, dressing wounds, splinting fractures and performing similar life-saving techniques. Casualties awaiting transportation to the rear would be kept here on a short-term "holding" basis. When possible, equipment and personnel from these units would also be sent forward to collect casualties and render field first aid.

2. Civil Defense Emergency Hospitals: Complete with x-ray and operating room equipment, portable generators, 200 cots and medical supplies, emergency hospitals are stored in strategically-located sites around the nation. In an emergency, the hospitals would be set up in outlying schools, churches, and other buildings to provide working facilities for doctors and nurses successfully evacuated from the 1,900 general hospitals in the nation's critical target areas in conjunction with professional personnel and facilities in the support areas. (Editor's Note: — Four such hospitals are now available in Arizona.)

PROBABILITY OF FALLOUT DEBRIS DEPOSITION

THE FCDA has published a technical bulletin containing 43 charts that show the percentage probability of fallout during the first 12 hours following the detonation of a nuclear weapon at various distances and directions from the point of detonation. They are based on a U. S. Weather Bureau survey of wind soundings at 41 weather stations in the United States over a five-year period.

The bulletin (TB-11-31) is entitled "Probability of Fallout Debris Deposition." The charts used in the bulletin were developed as an aid to civil defense planning.

Other FCDA publications, which can be obtained from local civil defense organizations or purchased from the U. S. Government Printing Office, Washington 25, D. C., include: "Fallout and the Winds" (TB-11-21), "Introduction to Radioactive Fallout" (IG-19-1), "Protection Against Fallout Radiation" (TB-11-19), "Radiation Physics and Bomb Phenomenology" (TB-11-22), "Radioactive Fallout Problem" (TB-19-1), "Residual Radiation in Relation to Civil Defense" (AB-179), "Shelter from Radioactive Fallout" (TB-5-2), and "What You Should Know About Radioactive Fallout (PA-B-7).

"THE MOSCOW MISSILE"

WE SHOULD not try to blind ourselves to the real magnitude of the achievement. We must assume that the Russians have solved successfully the three key problems: creation of powerful rocket motors capable of sending a rocket many thousands of miles, fabrication of a warhead which will not disintegrate from heat before reaching the earth, and development of a navigation system permitting the rocket to be aimed so that it will reach a specific area of meaningful size.

"But if we take the Soviet announcement at face value and recognize the major technical and production feat it represents, what has and has not changed in the world situation, and what are the implications for us?

"One fact has clearly not changed. Any future major war with use of modern weapons would still wipe out civilization. . . . The comforting illusion many have tended to believe, to the effect that we must always — by some law of God or the like — be the most technically advanced country in every field is now destroyed. . . . But beyond that it is clear that a re-examination of our military policy is required.

"Yet above all these stands the central fact: man's new ability to destroy himself and all life on this planet. The fundamental problem remains that of reaching understanding and harmony among all nations and all peoples. We dare not lose sight of that key imperative." (Editorial, New York Times.)

DERMATOLOGIC FORMULARY
by Frances Pascher, M.D. 2nd ed. 172 pages. (1957) Hoeber-Harper. $4.

Here are selected and tested dermatologic prescriptions from the New York University Hospital. Presented are the uses, indications and contraindications for all the new therapies in a concise and accessible form.

Stacey's Medical Books, San Francisco, California.

SCHIZOPHRENIA: Somatic Aspects
by Derek Richter. 181 pages. Illustrated. (1957) Macmillan. $7.

This report, a symposium held in London under the Mental Health Research Fund, is a summary of currently active work on somatic aspects of schizophrenics. Biochemical, endocrine, metabolic, pathologic, electro-encephalic, and drug approaches are weighed. This report will bring you up to date.

Stacey's Medical Books, San Francisco, California.

SURGICAL TECHNIQUE
by A. V. Partipilo, M.D. 6th ed. 966 pages. Illustrated. (1957) Lea & Febiger. $20.

The author uses a physiological and anatomical approach to the common surgical problems of the head and neck, chest and abdomen (including heart and great vessels), breast, hernia, hydrocele, and peripheral vascular problems. Pertinent points of pathology are considered. Thirty-eight new chapters have been added to this edition, covering cardiovascular surgery, anethesiology, the use radioactive substances in surgery and many other topics. The text does not deal with genitourinary, gynecological or neurosurgical problems. Each chapter is followed by a questionnaire on its subject matter. Bibliographies and the index are complete.

Stacey's Medical Books, San Francisco, California.

FOGARTY SEES ACTION ON SOME FORM OF FORAND BILL NEXT YEAR

REP. JOHN Fogarty (D–R.I.), chairman of the house subcommittee that handles appropriations for nearly all U. S. health programs, predicts that congress will vote a program of federal assistance to the aged for their hospital needs in 1958. The major bill on this subject is sponsored by a fellow Rhode Island Democrat, Rep. Aime Forand. It would amend the social security system to permit the aged social security beneficiaries and their dependents and survivors to get free hospitalization and surgical services. The bill has the official support of the 13 million member AFL-CIO.

Speaking to a meeting of the Washington chapter of the National Association of Social Workers, Mr. Fogarty cited several reasons for his belief that congress would enact some legislation on hospitalization for the aged: (1) growing unemployment, which he feels may reach 6 million by next March, will put pressure on legislators to do something, and (2) it is an election year. The Forand Bill can be amended, he said, and the final measure may not resemble it as now written.

The Rhode Island congressman also favors increasing monthly social security benefits, reducing the retirement age for both men and women to 60 and making social security payments available to the disabled regardless of age.

The AFL-CIO at its annual convention urged liberalization of social security, indorsed the Forand Bill and proposed a 10-year extension of the Hill-Burton hospital construction program.

AHA OPPOSES FORAND BILL BUT SEES EVENTUAL FEDERAL ACTION

THE AMERICAN Hospital Association's board of trustees is opposing the Forand Bill for free hospitalization of the aged, but it concedes that federal legislation of some sort will be necessary "to solve the problem satisfactorily." In their policy statement, the trustees raise the prospect of an alternative approach: a revival of the Flanders-Ives proposal for federal and state matching funds to underwrite some of the cost of premiums for voluntary health insurance for the aged and other groups. This would not be under social security.

While admitting that using the social security mechanism to provide hospitalization has certain inherent dangers, the AHA board says that if other voluntary means are not found, the use of social security "may be necessary ultimately."

AHA objections to the bill sponsored by Rep. Forand (D–R.I.) were based on the following: (1) Inadequate safeguards against governmental interference with the actual operation of hospitals, (2) Eligibility of aged beneficiaries is based on attainment of prescribed ages without regard to employment, thus inviting "a progressive reduction in those age levels with the ultimate possibility of a total program of government-financed hospital care," and (3) The bill makes possible the provision of care for other than health reasons.

THE DERMATOLOGIST'S HANDBOOK
by **Ashton L. Welsh**, M.D. 427 pages. (1957) Thomas. $15.

From the preface—"Purpose: To organize into a rational systematic classification, for purposes of instruction and ready reference, that large number of topical and internal therapeutic agents concerning which a dermatologist must have knowledge." The author is an assistant professor of dermatology and syphilology, University of Cincinnati.

Stacey's Medical Books, San Francisco, California.

PRACTICAL USE OF OFFICE LABORATORY AND X-RAY
by **Paul Williamson**, M.D. 323 pages. Illustrated. (1957) Mosby. $10.75.

Here is a discussion of procedures that can be done in any office with a minimum of basic equipment. Based on critical analyses of the functions and functioning of several hundred office practices, the author emphasizes the meaning of results and the common sources of error.

Stacey's Medical Books, San Francisco, California.

CONSULTANTS NAMED TO ADVISE ON RESEARCH DONE BY NIH

THE NATIONAL Institutes of Health, which always have had councils to advise them on grants for non-federal research projects, soon will have additional groups to advise them on work done in the institutes themselves and by NIH staff people in the field. The new six-man groups, to be known as boards of scientific counselors, will be composed of leading scientists from outside the federal government. Each of the seven institutes will have a board, as will the NIH division of biologics standards, which conducts research as part of its responsibility for maintaining safety, purity and potency of biologic products.

Four of the boards already have been named, and others will be announced later. Formed so far are the following:

National Heart Institute — Drs. Robert F. Loeb, chairman, Columbia University; Alfred Blalock, Johns Hopkins Hospital; Julius H. Comroe, Pennsylvania Graduate School of Medicine; Paul C. Zamecnik, Massachusetts General Hospital; Maurice H. Seevers, University of Michigan; H. E. Carter, Ph.D., University of Illinois.

Institute of Arthritis and Metabolic Diseases — Drs. Cecil Watson, chairman, Minnesota School of Medicine; Edwin Bennett Astwood, New England Center Hospital, Boston; Samuel Gurin, Ph.D., Pennsylvania School of Medicine; W. C. Stadie, University of Pennsylvania; Oskar P. Wintersteiner, Ph.D., Squibb Institute of Medicine Research, New Brunswick, N. J., William J. Darby, Vanderbilt School of Medicine.

Institute of Dental Research — T. J. Hill, D.D.S., chairman, Western Reserve University; J. L. T. Appleton, D.D.S., University of Pennsylvania; W. D. Armstrong, M.D., University of Minnesota; R. F. Sognnaes, D.M.D., Harvard School of Dental Medicine; F. D. Ostrander, D.D.S., Michigan School of Dentistry; A. G. Brodie, D.D.S., College of Dentistry, University of Illinois.

Division of Biologics Standards — Drs. Johannes Ipsen Jr., chairman, State Department of Public Health, Massachusetts; Robert Pennell, Ph.D., Protein Foundation, Inc., Cambridge, Mass.; Theodore E. Woodward, University of Maryland Hospital, Baltimore; David Bodian, Johns Hopkins; Philip Sartwell, Johns Hopkins; Dennis W. Watson, Ph.D., University of Minnesota.

$27 MILLION AWARDED IN NIH RESEARCH GRANTS IN NOVEMBER

NATIONAL Institutes of Health reports grants totaling $27 million made during November to non-federal institutions and individuals to finance research. Earlier in the fiscal year, a total of 3,325 grants with awards totaling $46 million had been given out, for a total of more than $73 million between July 1 and Oct. 31.

Of the November grants, only 155 amounting to $4.9 million went to new projects, with the remainder going to continue or supplement research work begun earlier with U. S. help.

In all, 310 institutions are being assisted by NIH grants, including medical schools, universities, hospitals and other research centers. They are located in 45 states, the District of Columbia, two territories and 14 foreign countries.

Totals awarded by institutes in November are: "Cancer, 457 grants for $8,179,573; Heart, 224 for $3,590,018; Allergy and Infectious Diseases, 187 for $4,790,030; Arthritis and Metabolic Diseases, 191 for $2,311,178; Dental Research, 110 for $1,150,548; Mental Health, 94 for $2,382,244; Neurological Diseases and Blindness, 214 for $3,036,881; General (Division of Research Grants), 112 for $1,573,158.

A DAY IN THE LIFE OF MR. AVERAGE AMERICAN

THE following story which was written by an investment man out on the West Coast, is so thought-provoking that it deserves reprinting.

"Let me tell you about a typical day in my life — it was Lincoln's birthday, I believe — anyway, it was a holiday. I got up in the morning, dressed with nylon underwear and a dacron shirt, shaved with a Remington razor. Had Kellogg's corn flakes, National Dairy eggs, Armour's bacon and Maxwell House coffee for breakfast.

"I drove to the office to look over the mail in a General Motors car, fueled with Esso gasoline that came from a pump using a Veeder-Root Counter. The engine was lubricated with a Union Carbide and Carbon synthetic oil, and the paint job was by duPont. The car was equipped with EZY-Vision safety glass by Libbey-Owens Ford. The tires were Firestones.

When I got to the office I received some confirmations which were prepared on an I.B.M. machine. While there, my doctor called on the telephone (thanks to A. T. & T.) and said: "They are having a flu epidemic in the East and it may spread to the West Coast. You should have a flu shot." So I went to his office and got a shot prepared by Merck & Company and, incidentally, I have not had the flu. I called United Airlines and made a reservation to San Francisco on a Douglas DC 6B.

"I returned home and found my wife had done her laundry in the Westinghouse Automatic Twins, washer and dryer. She prepared lunch from a Norge refrigerator by Borg-Warner on a General Electric range, and had National Biscuit Company cakes for dessert.

"After lunch I did some gardening, using Krilium by Monsanto Chemical Company in the soil. I then did some cabinet work in my shop. Started my saw with a Square D switch and sawed some Weyerhaeuser lumber. Found a rough spot on my hammer handle and wrapped it with Scotch Tape, A Minnesota Mining and Manufacturing Company product. Then I cut my finger and patched it up with a Band-Aid by Johnson & Johnson.

"My wife then called me to dinner; she was dressed in an Everglaze, J Bancroft & Sons, housedress. After dinner I sat down in my easy chair, filled my pipe with R. J. Reynolds tobacco, watched a television show sponsored by Chrysler Corporation, broadcast by CBS, on a Zenith television set equipped with an RCA picture tube. Had a bottle of Pabst Blue Ribbon beer, and when the evening was over I dressed for bed in orlon pajamas and went to sleep on a Goodyear airfoam mattress.

"Each of the subjects mentioned in this story was a product of an American industry. There are hundreds more which contribute to my comfort and enjoyment, but I could not possibly use all of them in one day.

"I have not tried to be dramatic; I simply call your attention to the fact this mythical day happens to millions of Americans EVERY day. Most of them never give a moment's thought to the fact that they can share in the profits and own a part of the companies that make these products and offer these services.

"To grow with America . . . INVEST in America."

FOLSOM CITES HEALTH AND WELFARE GAINS IN 1957

SECRETARY Folsom, in a year-end review of the health, education, and welfare department's activities, notes further progress in health, a steady growth of the social security system and a reawakening interest in educational problems. "These and many other developments are reasons for renewed confidence in the strength and resourcefulness of the American people," he states. Some highlights of the Folsom summary:

Health Facilities — About $123 million in federal money was allocated for building 483 general, tuberculosis, mental and chronic disease hospitals plus rehab and diagnostic centers and nursing homes.

Social Security — Beneficiaries have risen from 9.3 million to over 11 million, including 150,000 disabled workers age 50-64; disability payments accounted for $60 million and expenses $5 million.

Health, Research and Training — Of the $211 million for NIH, $110 million was grants to states and for research by labs, medical schools, hospitals and individual scientists. Another $39 million was spent to train promising research scientists.

Communicable Diseases — Such diseases continued their steady decline.

FOLSOM ASSISTANT URGES RESTUDY OF WELFARE PROGRAMS

SECRETARY Folsom's top assistant, Undersecretary John A. Perkins, proposes a wholesale re-examination of welfare programs, in the light of heavy federal spending for defense research and science. Mr. Perkins, talking to the American Public Welfare Association, said he was not in any way challenging the concept of federal grants in aid to help in cases of poverty and want, nor was he suggesting turning back all public assistance responsibility to the states. But he added:

"I am suggesting that the present state of world affairs is a signal that there will inevitably be a review on all levels of government of all governmental services. Their relative significance and the contribution of each to our national leadership — indeed survival — in the atomic-space age will necessarily be studied and restudied."

Medical care costs account for a growing percentage of all money — federal and state — spent on public assistance. U. S. aid is restricted to four categories, the aged, dependent children, the blind and the disabled.

LESLIE B. SMITH, M.D.

DISABILITY CHECKS UNDER SOCIAL SECURITY NEAR $10 MILLION A MONTH

SOCIAL Security administration, taking stock of nearly six months' operation of its disability payments program, estimates that about 131,000 persons are getting payments. By next July the total on rolls should be around 200,000. SSA notes that average payments to the disabled are $72.24 a month. This compares with the national average of around $65 for all other retired.

This is explained in part by the fact that (a) the national average takes in many older persons who were not fully employed in previous years and, (b) wages have gone up since the 1930s and early 1940s. The disabled covered, on the other hand, come more recently from the labor market.

On the basis of 200,000 on the rolls next year and assuming the average monthly payment is unchanged (which is unlikely), the disability trust fund will be paying out at the annual rate of nearly $175 million. SSA estimates that the fund had $525 million in it as of September. This is derived from the one-fourth of 1 per cent payroll tax increase that went into effect last January. Note: At the time of the hearings on the disability proposal, HEW Secretary Folsom pointed out that the program for the first full year would cost close to $200 million, rising to around $900 million in 1980.

In a separate report, the agency reminds those disabled workers who were eligible for payments last July that they may lose up to $651 in retroactive payments if they don't apply by the end of December. Under the law, eligible persons who make application this month can be paid benefits going back to July 1. Payments range from $30 to $108.50 a month, depending on the workers' average monthly earnings under

social security. Application for disability can be made at any one of 560 SSA offices and they must be received by Dec. 31. Disabled filing after this month will be paid for the month in which they apply, but not for any prior period of disability.

WELFARE COSTS INCREASING AT SAME RATE AS U.S. PRODUCTION

SOCIAL Security administration, completing a survey for the fiscal year ending June 30, 1956, reports that spending by public agencies—U. S., state and local—for social activities is increasing at the same rate as the total national output of goods and services. That is the most recent year for which state and local figures are available. In fiscal year 1954-55 this type of welfare spending totaled $32.2 billion, and in fiscal 1955-56 it was $34.5 billion. However, the higher level of spending remained at 8.6 per cent of the gross national product, the same proportion as for the year before. Of the $34.5 billion, $19.9 billion was state and local money, $14.6 billion U. S. money.

Activities covered include social insurance of all kinds, public assistance, public health and medical services, veterans' programs, education and public housing.

BOSTONIAN NAMED AS FIFTH VA ADMINISTRATOR

SUMNER G. Whittier, a former lieutenant governor of Massachusetts and an official of the veterans' administration since last January, has been appointed chief of the agency, succeeding Harvey V. Higley who resigned recently. Mr. Whittier thus becomes the first veterans' administrator named from within the organization. All others have been called from other assignments or jobs. Mr. Whittier has been VA's chief insurance director since last January; that department handles policies covering over 6 million veterans. A Republican, Mr. Whittier was elected to his first post in 1938 as member of the Everett (Mass.) Common Council, three years after graduating from Boston University. He served in the state legislature, was in the navy during World War II, and was lieutenant governor from 1953-1956. He was the Republican candidate for governor in 1956, losing out to Foster Furculo.

EAR, NOSE AND THROAT DYSFUNCTIONS DUE TO DEFICIENCIES AND IMBALANCES
by **Sam E. Roberts**, M.D. 323 pages. Illustrated. (1957) Thomas. $8.50.

From the foreword by Morris Fishbein, M.D.: "Again emphasizing the constitutional approach to various disorders, Dr. Roberts takes into account the vital character of glandular activities and he finds, as might be expected, that various patients suffer from various inadequacies and that the glandular difficulties are often closely related to the dietary problems."

Stacey's Medical Books, San Francisco, California.

HEADACHE
by **Robert E. Ryan**, M.D. 2nd ed. 421 pages. Illustrated. (1957) Mosby. $6.75.

The second edition adds many recent advances in diagnosis and treatment, such as new chapters on tranquilizing drugs, histamine, the temporomandibular joint syndrome, and facial neuralgia. This is a handy book to have around.

Stacey's Medical Books, San Francisco, California.

LOCATION OPPORTUNITIES

ASHFORK—Pop. 700—North centrally located—Railroad center—Contact the Women's Club, Ashfork, Ariz.

BENSON—Excellent opportunity for GP—This David-Benson trade area has about 5,000 population with only one doctor available. A small sleep-in hospital can be set up very easily. Hospital 25 miles away. Chamber of commerce will furnish telephone answering service, nine to five. Contact Bernard Fisher, D.D.S., medical committee of the chamber of commerce, Benson, Ariz., or James M. Hesser, M.D., 6th and Huachuca streets, Benson, Ariz.

CAMP VERDE—Located in the heart of a large farming and ranching area on the Verde River. Approximately 100 miles north of Phoenix. Badly in need of a medical doctor. Contact Ivy N. Moser, R.N., Camp Verde, Ariz.

FLAGSTAFF—Pop 17,500—Largest city in the north central Arizona trading area. One pediatrician is needed (as there are a number of general practitioners who would gladly refer work to him). Excellent opportunity for an EENT doctor and a general practitioner. Contact K. O. Hanson, M.D., secretary, Coconino County Medical Society, Five North Leroux, Flagstaff, Ariz.

GILA BEND—Pop 2,500—80 miles west of Phoenix—Nearest town to the Painted Rock Dam Project—Good opportunity for general practitioner. Cattle, cotton and general farming. Office and equipment available. $150 monthly income from board of supervisors. Contact Mrs. J. F. Allison, Box 485, Gila Bend, Ariz.

HOLBROOK—Population above 7,000. Located in the heart of the northeastern pine country of Arizona on U.S. Route 66. Need services of general practitioner. For full details, contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

MIAMI—Opportunity for GP — Industrial hospital staffed by approximately seven doctors, who care for personnel and families of those who work for the three principal mining companies. This community is served by numerous small mining and ranching interests. Contact Robert V. Horan, M.D., Miami-Inspiration Hospital, Miami, Ariz.

MORENCI — Mining community located near New Mexico-Arizona border--Pop. 10,000 —Has vacancy at hospital for GP. Contact Carl H. Gans, M.D., Morenci Hospital, Morenci, Ariz.

PHOENIX — Opening for board certified radiologist in diagnosis and therapy. Salary open for the first year. Percentage for the second and third years and full partnership at the end of the third year. Opportunity to join a group serving two hospitals and two private offices. Apply Douglas D. Gain, M.D., 2021 N. Central Ave., Phoenix, Ariz.

PHOENIX—Good opportunity for associate radiologist in Phoenix area. Contact Ernest Price, M.D., 9112 N. 2nd St., Phoenix, Ariz.—(WI 3-3491).

SAFFORD—In need of GP—Pop. 6,000 — Has ideal year around climate with good schools, park, swimming pool, golf course, Elks Club. Private hospital, open staff. Surgical privileges after six months if qualified. Completely equipped office for rent, and equipment for sale. Contact M. T. Sandeno, M.D., 803 7th St., Safford, Ariz.

SHOW LOW—Pop. 1,500—Trading center for some 10,000 people. Summer and winter recreation area, cool climate and beautiful forest country. At present there is no M.D. in Show Low and it wishes to locate a doctor there who would help establish a hospital. The town is anxious to locate a doctor and promises full co-operation. Contact either Mary and Eric Marks, Paint Pony Lodge, Show Low, Ariz., or Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz., or Mr. Mitchell Bushman, Show Low, Ariz.

SPRINGERVILLE—Need for general practitioner, (private practice, to be associated with Doctor Browning). Good hospital facilities. Has drawing population of 6,000. Would like to obtain a doctor as soon as possible. Contact Ellis V. Browning, M.D., Box 390, Springerville, Ariz.

ST. JOHNS — Seriously need a doctor of medicine, preferably a general practitioner, to locate in this east central Arizona community. Population is approximately 1,500 with several other small towns in the general area. About 20 miles from New Mexico in the beautiful rim country of Arizona. Contact Donald F. DeMarse, M.D., Box 397, Holbrook, Ariz.

TOLLESON—In need of GP—Serves a trading area of from 12,000 to 15,000. Ten miles west of Phoenix. Elementary and high schools churches of all denominations. Complete office and equipment for GP available on reasonable term lease or purchase. Contact Mr. Norman Andersen, president, chamber of commerce, 9112 West Van Buren St., Tolleson, Ariz.

TUCSON—The VA Hospital is in urgent need of an orthopedic surgeon. They prefer someone who is board certified, but would take someone who has had special training, as they have the local men in this field available for consultation service. State director, professional service, VA Hospital, Tucson, Ariz.

YOUNGTOWN — Pop. 130 — Located 16 miles from Phoenix and just a few miles from several small towns, each a potential field of practice. Most residents are 60 years of age or older and are in need of medical care. Office space is currently provided at no rental. A medical center is being planned. Interested

doctors may contact Mr. Sid Lambert, Box 61, Marionette, Ariz.

FOR INFORATION ON OPPORTUNITIES IN THE FIELD OF INDUSTRIAL MEDICINE, CONTACT:

Harold J. Mills, M.D., Phelps Dodge Hospital, Ajo, Ariz.

Carl H. Gans, M.D., Phelps Dodge Hospital, Morenci, Ariz.

Ira E. Harris, M.D., Miami-Inspiration Hospital, Miami, Ariz.

Charles B. Huestis, M.D., Box 928, Hayden, Ariz.

Elvie B. Jolley, M.D., Copper Queen Hospital, Bisbee, Ariz.

H. W. Finke, M.D., Magma Copper Company Hospital, Superior, Ariz.

John Edmonds, M.D., Kennecott Copper Corporation Hospital, Ray, Ariz.

Francis M. Findlay, M.D., San Manuel Hospital, San Manuel, Ariz.

LOCATION INQUIRIES

DALY, ANTHONY J., M.D., 119 North Church St., Rockford, Ill., *Oph;* graduate of the Loyola University School of Medicine, 1942. Interned at St. Anne's Hospital, Chicago, Ill. Received his residency training at Wesley Memorial Hospital, Passavant Memorial Hospital and veterans' administration, Chicago. Desires clinic or associate type practice, is available 1958.

DEMAS, JOHN J., M.D., 25 Elmview Place, Buffalo 7, N. Y.; a 1953 graduate of the University of Buffalo and is presently completing his fourth year of orthopedic surgical residency, holds a New York license. He prefers associate practice and will practice orthopedic surgery. Will be available July 1, 1958.

GOLDING, THOMAS ALEXANDER, M.D., 97 Girvin St., Nanaimo, B. C., Canada, *I* is a Canadian with 10 years residence in the U. S.; is a 1943 graduate McGill University, Montreal, Canada; and interned at Montreal General Hospital, Montreal. Has served 36 months service with Canadian Army Medical Corps and formerly practiced in Calgary, Alberta, Canada. Desires assistant or industrial type practice. Available February 1958.

KATIMS, ROBERT B., M.D., 745 Lake Drive, Baltimore, Md., *I;* graduated in 1952 from the Washington University School of Medicine and interned at the St. Louis City Hospital, St. Louis, Mo.; has had residency training at Johns Hopkins Hospital and is currently licensed in the states of Florida and Missouri. Desires group practice, Available July 1958.

NIGHTINGALE, ROBERT HENRY, M.D., 145 Nesper Road, Oak Ridge, Tenn.; *I;* is a 1952 graduate of the University of Utah College of Medicine and received his intern training at the Salt Lake General Hospital; at present he is in 3rd year of residency training. Is interested in associate type of practice with emphasis on internal medicine.

PAYER, HAROLD S., M.D., senior psychiatric medical director at Danville State Hospital, Danville, Pa.; is a 1933 graduate of the University of Rochester, and interned at the Sacred Heart Hospital, Allentown, Pa. Is presently licensed in Pennsylvania and prefers associate or institutional psychiatric practice. Is interested in Flagstaff and is available now.

SECOY, CLYDE F., M.D., 4 surgical division, Bellevue Hospital, 26th St. and First Ave., New York, N. Y.; *GS* is 1955 graduate of McGill University, and is presently serving a residency in general surgery; desires associate type practice and will be available in 1960.

SELAH, CHARLES EDWARD, M.D., Huey P. Long Hospital, Pineville, La.; *S;* is a 1951 graduate of the Tulane University School of Medicine; interned at Charity Hospital, New Orleans, and holds licenses in the states of Mississippi and Louisiana; will complete a four-year residency in general surgery on June 30, 1958, and has completed his military obligations. Desires clinic or associate practice. Is available July 1, 1958.

Obituary

C. R. Swackhamer, M.D.

THE MEDICAL profession of Arizona has missed seeing Dr. C. R. Swackhamer who died at 71 at his home in Globe, on June 12, 1957. His illness had extended over more than five years, and although it was somewhat obscure at first, was diagnosed as carcinoma of the prostate, which was apparently kept in check quite effectively by the use of estrogens. He had been able to participate in some of his social activities and had helped out at the hospital in Globe, but in fact had not been in active practice since the onset.

C. R. Swackhamer, M.D.

The highlights of his life were reported in the press at the time of his death. He came to Arizona when Hayden was booming with activity due to the war demand for copper in January 1917. He worked at the Miami-Inspiration Hospital under Dr. John Bacon, and in 1920 he became chief surgeon for the Magma Copper Company in Superior from which base most of the activities for which he was so well known were conducted. He lived on the side of the mountain from which many millions of dollars worth of high grade copper ore were taken. His home and the medical dispensary were adjacent to the shaft of the Copper Queen Mine a few hundred feet away. William Boyce Thompson, so prominent in developing the Magma Company, was a close friend who built the doctor's offices for him in gratitude for many services. His great concern was with mine safety, the prevention of accidents and the care of the injured. Inevitably it was in the industrial medical field in the early days of the growth and development of the basic practices in this area, that much of his energy was expended. As an example of the dramatic situations which occasionally arose, he told of an experience of being called down into a shaft where a cave-in had taken place. A miner's leg was pinned under a pile of rock in such a way that there was nothing for it but to amputate then and there. A tourniquet and a jacknife were the only instruments available, and the man's life was saved.

The Magma Hospital was built under his direction, and he served as chief surgeon from 1920 to 1948. Much of the time he had to depend on help from the neighboring cities. He was inclined to use consultation freely whenever he thought the best interests of his patient might be served thereby.

Dr. Swackhamer's interest in many fields of community life especially fitted him for service in his position. He was a community builder, a diplomat who could be counted upon to help settle differences between factions with a minimum of friction. He was active in Boy Scout work, and served nine years on the executive committee of the Scouts for Pinal and Gila counties. For many years he was president of the Apache Golf Club in Superior, and was prominent in golf circles throughout the state. There were many activities in which he was prominent, too numerous to detail here. For 36 years a Mason, be-

longing to the 32nd degree; he was a Commander of Knights Templar, and a charter member of the Miami Chapter of the Order of the Eastern Star. He enjoyed membership in the Arizona Club of Phoenix, the Cobre Valley Club, Rotary, and several other clubs, in the state.

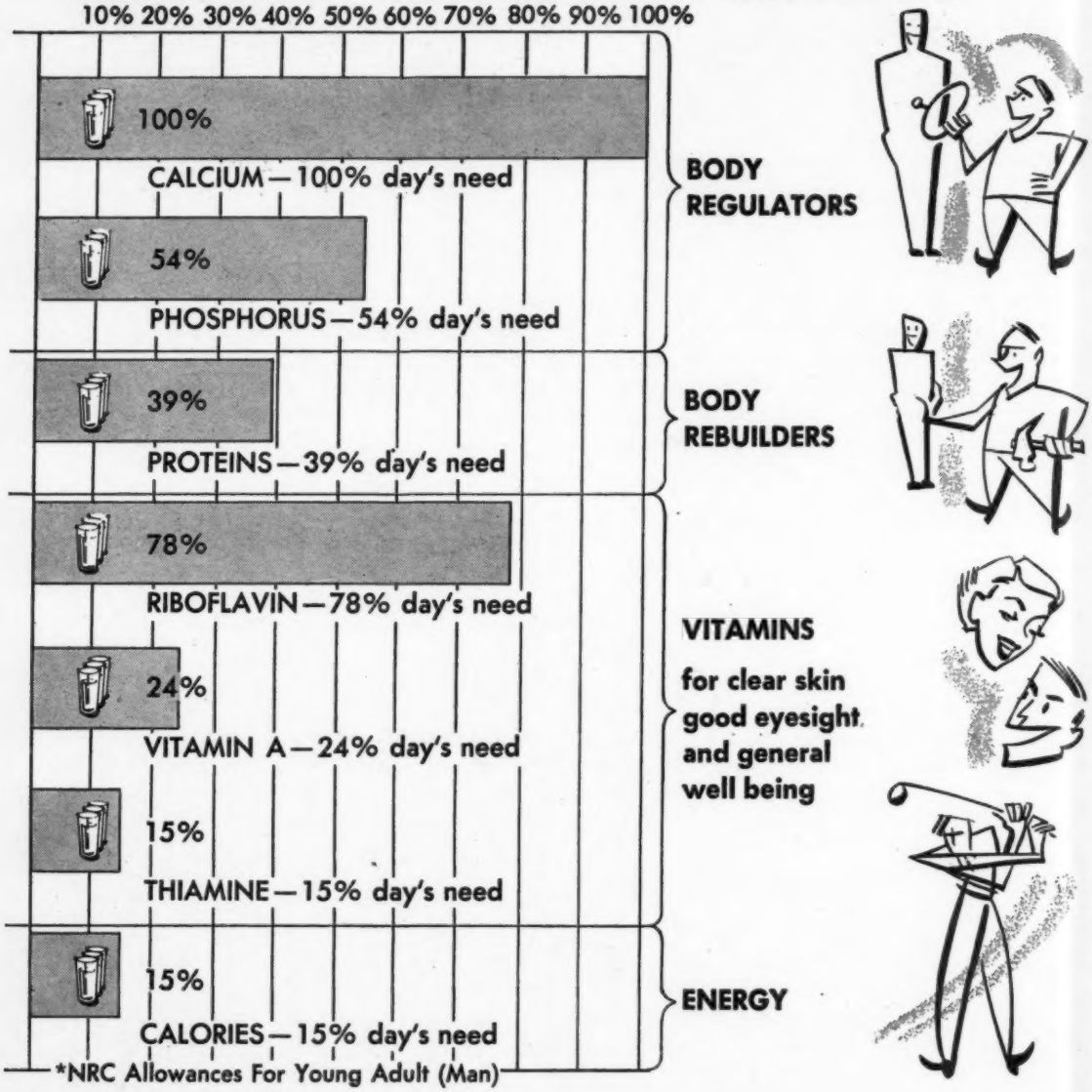
Of special interest to medical men is the fact that Dr. Swackhamer was a fine organization man, loyal in his attendance and participation in scientific medical sessions, willing to serve on committee assignments, and assume positions of leadership. He was three times president of his (Gila) county society, the last time 1956; president of the Arizona State Medical Society in 1937, and of the Southwest Medical Society in 1935. He was constant in his attempt to keep abreast of latest in scientific medicine, making many pilgrimages to clinics and going to national society meetings at great expense of time and money. The people of Superior and the surrounding territory received excellent medical services from him.

His wife, Daisy, lives in Globe with a son, Robert. The other son, William, an M.D., was called back into the service recently, to be on the aircraft carrier "Wasp," after having been in practice in Jena, La., for several years. William has four children. In the adjustment to the life of a mining community, his wife must be given a great deal of credit. They maintained broad interests in outside cultural activities, driving to Phoenix and Tucson for special events on many occasions. She took great pride in his many achievements.

Many are there, both within and outside the medical profession, who remember Dr. Chester R. Swackhamer with affection and respect.

H.R.

FOOD VALUES in fresh MILK



AMERICAN DAIRY ASSOCIATION OF ARIZONA

dedicated to the health of Arizona's people

Future Meetings

ARIZONA MEDICAL ASSOCIATION MEETING

Chandler, May 1958

Faculty

Cyril MacBryde, M.D.
Editor of the Year Book of Endocrinology, Associate Professor of Medicine, Washington University

James Nolan, M.D.
Consulting gynecologist, Los Angeles Tumor Institute

William R. Arrowsmith, M.D.
Head of Department of Medicine, Ochsner Clinic; Assistant Professor of Medicine, Tulane University.

Louis Byars, M.D.
Plastic Surgeon, Assistant Professor of Clinical Surgery, Washington University.

William C. Deamer, M.D.
Professor of Pediatrics, University of California.

Juan Del Regato, M.D.
Radiologist, Head of Penrose Cancer Hospital, Colorado Springs, Colo.

George Griffith, M.D.
Professor of Medicine, University of Southern California.

Charles Elkins, M.D.
Neurosurgeon, Tucson, Ariz.

Robert S. Pollack, M.D.
Department of Surgery, Stanford University School of Medicine, and University of California School of Medicine. Author: "Tumor Surgery of the Head and Neck," and "Treatment of Tumors of the Breast."

12TH ANNUAL SYMPOSIUM ON FUNDAMENTAL CANCER RESEARCH

THE 12TH Annual Symposium on Fundamental Cancer Research will be held March 6, 7 and 8, 1958 at the University of Texas M. D. Anderson Hospital and Tumor Institute, Houston, Texas.

The topic for the symposium will be "Radiation Biology and Cancer." The first day will be devoted to papers from the staff at M. D. Anderson Hospital which relate to the general symposium subject. The final two days of the program will consist of papers presented by recognized authorities in radiation research.

Chairmen for the radiation biology sessions include: Titus C. Evans, Radiation Research Laboratory, University of Iowa College of Medicine; Jacob Furth, Pathology Department, Children's Cancer Research Foundation, Inc., Boston, and Henry S. Kaplan, Radiology Department, Stanford University Medical School, San Francisco. General chairman of the symposium is Warren K. Sinclair, chief physicist at the University of Texas M. D. Anderson Hospital and Tumor Institute.

THE EIGHTH ANNUAL POSTGRADUATE MEDICAL AND SURGICAL CONVENTION

THE Eighth Annual Postgraduate Medical and Surgical Convention, presented by the Medical Staff of Pioneers Memorial Hospital, Brawley, California, will be held March 14th and 15th, 1958.

The program this year is sponsored by the Fcaulty of Cook County Graduate School of Medicine, Chicago. The speakers will be Philip Thorek, M.D., Manuel E. Lichtenstein, M.D., John W. Howser, M.D., Edmund F. Foley, M.D., Benjamin M. Gasul, M.D., Walter J. Reich, M.D.

INTERNATIONAL COLLEGE OF SURGEONS MEETING TO CONSIDER PROBLEMS OF GENERAL PRACTIONER

THE 11th biennial International Congress of the International College of Surgeons will be held in conjunction with the 23rd annual Congress of the United States and Canadian Sections (North American Federation) in Los Angeles, March 9-14.

An innovation of the meeting will be a surgical emergencies panel to which members of the American Academy of General Practice are invited. Dr. Ross T. McIntire of Chicago, executive director of the International College of Surgeons and former surgeon general of the U. S. Navy, will be the moderator.

Phoenix Clinical Club

The Case History in this discussion is selected from the Case Records of the Massachusetts General Hospital, and reprinted from the New England Journal of Medicine. The discussant under Differential Diagnosis is a member of the staff of the Massachusetts General Hospital. The other discussants are members of the Phoenix Clinical Club.

MASSACHUSETTS GENERAL HOSPITAL

PRESENTATION OF CASE 43171

A 40-YEAR-OLD woman was admitted to the hospital because of proptosis of the right eye.

Two years previously, a slight, nontender swelling in the right temporal fossa was noted. The eyes were said to be normal. One and a half years before entry, exophthalmos on the right was noted. There was no visual deficit. Subsequently, there were intermittent episodes of itching of the right eye, a gradual increase in the exophthalmos, and swelling in the right temporal fossa. For years she had had occasional headaches that now became more severe and persistant, occurring once or twice a week and lasting up to three days; the pain was over the right fronto-parietal region and occasionally radiated to the left side of the head. Two months before admission, diplopia on upward gaze was noted. X-ray films of the skull demonstrated an increased density of the right wing of the sphenoid bone. One month before entry there was gradual decrease in severity and frequency of the headaches, and with an increase in lacrimation in the right eye. No other noticeable neurologic or visual disturbances were present.

Physical examination showed a well nourished woman with moderate exophthalmos on the right. The thyroid gland was not enlarged. A firm, smooth, nontender, nonpulsatile, slight swelling without an associated bruit filled the right temporal fossa. The pupils were round and equal and reacted to light and on accommodation. Vision and movements of the extraocular muscles were normal, except for weakness of the right medial and superior rectus muscles with diplopia upon upward gaze to the left. Visual perimetry studies were normal. Examination of the optic fundi was negative.

The temperature, pulse and respirations were normal. The blood pressure was 110 systolic, 80 diastolic.

The urine was normal. Examination of the blood revealed a hemoglobin of 12.6 gm. per 100 ml. and a white-cell count of 5,400. An electroencephalogram showed a mildly abnormal record without focal abnormality. Plain films of the skull demonstrated a homogeneous increase in the density of the right wing of the sphenoid bone. A cerebral angiogram with injection of the right internal carotid artery by the opaque medium demonstrated no abnormality of the cerebral vessels except for some elevation of the carotid siphon.

An operation was performed on the fifth hospital day.

PHILIP RICE, M.D.:

This case involves a 40-year-old woman with the very interesting finding of one sided exophthalmos. Her symptoms began two years before, with swelling in the right temporal fossa, and six months thereafter proptosis of the right eye began. This has gradually increased and also the swelling in the right temporal fossa has increased. There has likewise been an increase in her headaches. X-ray films demonstrate an increased density in the right wing of the sphenoid bone. There is no indication on examination, nor laboratory work, to make us suspect an infective process. Angiograms show no particular change in the cerebral vessels.

Unilateral exophthalmos can be due to pressure from within the orbit, or through pressure from behind the orbit. In our particular case, I think that we can immediately say that the pressure began behind the orbit, since there was swelling in the temporal fossa before the exophthalmos began. As to lesions behind the orbit we have our attention immediately directed to the right wing of the sphenoid bone, where x-rays demonstrate a homogenous increase in the density of the bone. We must conclude that there is a tumor in or on the surface of this bone that is responsible for her condition.

Investigations of tumors found in this area disclose that meningiomas of the sphenoid ridge are the commonest tumors in this area. They are flattened, cover considerable area of the interior

surface of the skull and actively invade bone, showing an X-ray densification. They commonly appear in the orbital cavity or the temporal fossa. If near the sella turcica, it may be eroded. In some cases there is pressure on the olfactory nerve, and sometimes there is pressure on the homolateral optic nerve and in certain cases the eye muscle nerves or even the trigeminal may be involved.

The prominent symptoms of meningioma of the sphenoidal ridge are first a slowly developing unilateral exophthalmos over a period of years without pulsation of the eye and without pain on pressure. The eye continues to move freely, but occasionally there may be eye muscle paralysis. There is usually some edema of the lids and conjunctiva, there is no change in the visual fields or the fundi, although late there may be swelling of the disk. They also cause a slight bulging of the temporal region, and occasionally uncinate seizures result from pressure on the temporal lobe.

The differential diagnosis rests with the lack of pulsation and the slowly developing protrusion of the eye, and these two factors rule out the many other possible causes. Syphilis may cause a similar condition, and more rarely a metastatic carcinoma or tuberculosis may be responsible. A cavernous sinus thrombosis or an arteriovenous fistula causing such symptoms would not be confused because of the severe symptoms involved in these cases. Tumors of the orbit and the optic nerve are ruled out by the symptoms presented in this case, and since almost all the other conditions described are in the orbit and not in the cranial cavity I rule them all out. Therefore I think that this patient had a meningioma of the sphenoidal ridge on the right side.

R. LEE FOSTER, M.D.:

This is the case of a female, 40 years of age, whose chief complaint is right exophthalmos. On the face of it, this would seem to be an open and shut case. In addition, she has had a swelling in the right temporal fossa for two years with the duration of the exophthalmos being only a year and a half. She has had other symptoms, such as pain over the right fronto-parietal area, diplopia on upward gaze, and increase in lacrimation in the right eye.

X-ray films of the skull showed increased density of the sphenoid bone. It is not mentioned whether this is the lesser or the greater wing, but presumably it is the lesser wing which forms a part of the sphenoid ridge.

Physical examination was essentially negative except for some disturbance of the ocular motor function of the right eye.

We are confronted then essentially with the differential diagnosis of unilateral proptosis. The causes of unilateral proptosis can be classified under several headings, each of which will be considered and eliminated, if possible, from the diagnostic picture. The first of these is a congenital unilateral proptosis, which, beside being relatively rare, does not apply here since this patient developed it at the age of 38. There is a unilateral proptosis which can be the result of swelling and edema from congestion attendant upon infections of the area which may involve sinuses, the orbit, or the venous sinuses. Thrombosis of the cavernous sinus is very frequently associated with a unilateral proptosis. I think all of these infections or inflammatory conditions can be ruled out in one fell swoop by considering that this patient had no temperature, no elevation of white count, and apparently never has been very ill with this difficulty.

The third class of conditions which may cause the unilateral proptosis have to do with vascular difficulties and include such things as the cavernous sinus thrombosis mentioned previously, but including also such things as arterio-venous aneurysm, aneurysm of the orbital vessels, and an arteriovenous angioma. These can be logically disposed of, I believe, by the essentially negative cerebral angiogram. This was essentially negative in respect to any anomalies or abnormalities of the vessels visualized except for the displacement of the carotid siphon. This finding, together with the mention of the arterial venous angioma, brings us logically into the next category to be considered, which is neoplasms or tumors.

Orbital tumors, as for example, sarcomatous infiltrations, angiomas, lipomas and such can and frequently do cause a unilateral proptosis. I am willingly led, even if perhaps by design, into discarding the orbital tumors by the emphasis on X-ray findings which suggest intracranial tumors as being more likely. Several types of intracranial tumors could be responsible for the exophthalmos. Frontal lobe tumors are sometimes guilty, although more rarely, and these tumors frequently may cause a localized bulging of the cranium. Perhaps this would explain the swell-

ing in the right temporal fossa, but I do not think so. Frontal lobe tumors are quite frequently accompanied by personality changes and other symptoms which this patient does not have. Tumors of the base of the skull and parasellar tumors more frequently give a unilateral exophthalmos. Increased density of the sphenoid ridge seen in the X-ray causes me to consider as first and most likely of the parasellar tumors, a meningioma. I believe that this type of tumor would be capable of causing all of the symptoms which this patient has, and all of the physical and laboratory findings would be compatible with the history of this patient. They are usually parasagittal in location, develop rather quietly and unobtrusively, are accompanied by increases in bone density in the surrounding area, and sometimes increased proliferation of bone. One other type of tumor which should be mentioned is a bony metastasis from malignancy elsewhere, but we certainly have no history or physical findings to suggest this possibility. Other conditions which may cause increased bone density and which should be mentioned are a petrositis, an osteoma or fibrocystic disease. Hemangioma of bone also occasionally does the same thing. None of these, however, are quite as likely, nor do they fit the circumstances as well as the meningioma of the right sphenoid ridge. My diagnosis then is a *meningioma of the right sphenoid ridge producing symptoms by pressure* and probably successfully removed at operation.

DIFFERENTIAL DIAGNOSIS

DR. DAVID G. COGAN: Unilateral exophthalmos was the presenting symptom. I shall ask Dr. Hanelin to show the X-ray films.

DR. JOSEPH HANELIN: The plain films of the skull show pronounced thickening of the right sphenoid, affecting both the lesser and the greater wings. This is visible in the lateral, the basal and the sagittal views. The pineal body is only faintly visualized and is not obviously displaced. The pituitary fossa is of normal size and shape and shows no erosion. The right internal carotid arteriogram demonstrates no abnormality of the small vessels or tumor stain, by which a meningioma can often be outlined. The arteriogram, however, by no means excludes meningioma, particularly since a serial set of films was not made. The supraclinoid portion of the carotid artery is uncoiled, straightened, elevated and displaced slightly posteriorly. The proximal portion of the middle cerebral artery is also slightly elevated. There is no mid-line shift of the anterior cerebral group. The displacement of the carotid artery appears to be directly related to the thickening of the right sphenoid bone.

DR. COGAN: Can you point out the superior orbital fissure and the optic foramen?

DR. HANELIN: Unfortunately, we did not take any films of the optic foramen, nor is there a set specifically designed to show the sphenoid wings. From the available films, one can indicate sphenoid involvement both above and below the superior orbital fissure—that is, the lesser and greater sphenoid wings are affected.

DR. COGAN: The usual procedure in these conferences is to attempt a seemingly erudite differential diagnosis and to save the most likely diagnosis for a final coup de grace. But in this case, the clinical and roentogenologic findings are so characteristic that I should like to reverse the usual procedure and discuss what appears to be the most probable diagnosis first, mentioning alternative diagnoses only in passing.

This case appears to be one of the meningiomas that arise from the lateral portion of the wing of the sphenoid and are called meningioma en plaque (pterional meningioma). The sphenoidal ridge is the osseous boundary between the anterior and middle cranial fossae made up of the greater and lesser wings of the sphenoid. For some reason, it is a relatively common site for meningioma, second in frequency to the parasagittal region.

Meningiomas arising on the sphenoidal ridge give in general two different syndromes, depending on whether they begin on the medial portion or the outer portion of the ridge. Those beginning on the medial portion involve characteristically the optic foramen and the superior orbital fissure, whence they give rise to optic atrophy with blindness, varying degrees of ophthalmoplegia and pain and numbness in the face. These medially placed meningiomas may show little roentgenographic abnormality other than erosion of the clinoids on routine skull film, although usually the presence of a tumor is evident in pneumoencephalograms or arteriograms. Sometimes, the medially placed tumors are sufficiently large to raise the intracranial pressure, whence they give rise to the Foster-Kennedy syndrome of optic atrophy and blindness in one eye with papilledema in the other.

Meningiomas arising along the outer aspect of the sphenoidal ridge, on the other hand, often give rise to a different picture. There is, as in this case, an initial exophthalmos with displacement of the eye downward. Ophthalmoplegia, when it develops, is characteristically a unilateral and isolated paralysis of upward gaze rather than a paralysis that follows the distribution of any of the ocular motor nerves. There is often an increased prominence of and palpable mass in the temporal fossa. Optic atrophy and blindness do not occur until late, and since these meningiomas are slowly growing, this may mean that visual symptoms do not occur until years after the onset of the exophthalmos, or bulge in the temporal fossa.

But the most distinguishing feature of these meningiomas of the outer portion of the sphenoidal ridge – the so-called meningioma en plaque–is the fact that the tumor itself may form very little mass, perhaps only a few millimeters thick, and yet stimulates in some way a striking overgrowth of bone. In consequence with these tumors one sees, in contrast to the medially placed tumors, a tremendous hyperostosis, such as is evident in the present films. It is this hyperostosis, rather than the mass itself, that gives rise to the exophthalmos and telltale bulge in the temporal fossa. Because these tumors often form merely flat and inconspicuous sheets of tissue, they are called meningioma en plaque. Their mass is so slight that pneumoencephalograms show no appreciable distortion of the ventricles, and the arteriograms show little displacement of the carotid artery. But the hyperostosis evident on routine films is so excessive and characteristic that pneumoencephalography is unnecessary for the diagnosis.

The present case is typical of a meningioma en plaque. The patient was a woman of 40 years. Meningiomas of the sphenoidal ridge occur most commonly in women and most frequently at middle age. The onset in the patient under discussion was insidious, with tumor of the temporal fossa and exophthalmos with preferential paralysis of upward gaze, but without visual loss. Moreover, the X-ray films are highly characteristic.

By way of differential diagnosis, we might mention the following. Olfactory-groove meningiomas are usually globular tumors giving rise to anosmia and mental changes. They often produce a Foster-Kennedy syndrome. There was nothing in the present case history or clinical findings to suggest this diagnosis, and the X-ray findings exclude it with a reasonable degree of certainty. An osteoma produces a more discreet area of calcification and then usually in association with the sinuses. Osteomas giving rise to exophthalmos usually arise from the medial aspect of the orbit. Osteogenic sarcoma is probably excluded on the basis of the slow rate of growth. Fibrous dysplasia is a possibility that I cannot exclude on the basis of the clinical findings, but with fibrous dysplasia I should not expect the uniform hyperostosis that we see in the x-ray films of the present case.

In conclusion, I have no good alternative for the diagnosis of flat meningioma of the outer wing of the sphenoid.

A PHYSICIAN: Was a lumbar puncture done?

DR. EDWARD P. RICHARDSON JR.: There is no record that a lumbar puncture was done in this case.

CLINICAL DIAGNOSIS

Meningioma
? Fibrous dysplasia
? Eosinophilic granuloma.

DR. DAVID G. COGAN'S DIAGNOSIS

Meningioma en plaque, outer wing of sphenoid.

ANATOMICAL DIAGNOSIS

Meningioma en plaque, outer wing of sphenoid.

PATHOLOGICAL DISCUSSION

DR. RICHARDSON: Dr. Ballantine, will you tell us your findings at operation?

DR. H. THOMAS BALLANTINE JR.: First, I should like to speak about this question of "pterional meningioma" and "meningioma en plaque." To me, a pterional meningioma is one that starts in the pterion, at the juncture of the lesser wing of the sphenoid with the temporal wing. These tumors can be round, globular masses and are not necesarily meningiomas en plaque. When one sees a patient that one suspects may have a meningioma of the pterion, it is quite possible that there is a considerably larger meningioma in the anterior fossa or at the junction of the anterior and middle fossae. I believed that this patient was sufferinig from a meningioma, either primarily retro-orbital or of the frontal fossa on the right–that is, if the meningioma was a globular mass and the reaction

that we saw in the X-ray films was secondary bone reaction.

At operation through a small, curvilinear incision just posterior to the right orbit I decompressed that structure to correct the proptosis of the right eye. The bone in this region was thickened, firm and avascular, but no evidence of tumor in the bone or over the floor of the anterior fossa was discernible. However, the intracranial exploration was not carried posteriorly as far as the optic chiasm or intracranial portion of the internal carotid artery.

DR. RICHARDSON: The pathological examination of the bone tissue removed at this operation amply bore out the correctness of Dr. Cogan's formulation of this case and his diagnosis. Most or a great part of the specimen was made up of well differentiated bone tissue with spaces of varying size, within which there was somewhat loose-textured fibrous connective tissue. In a number of areas there were aggregates of cells having a homogeneous appearance and grouped into somewhat rounded clusters. These cells were typical of those forming the largest group of meningiomas. This type of cell is found frequently in the leptomeninges in small aggregates lying on the outer surface of the arachnoid membrane between the arachnoid and the dura. Such cells are often called arachnoid cells or arachnoid cap cells. Japanese investigators in particular have studied the areas of greatest occurrence of cells of this type and find them to be most numerous along the major venous sinuses of the skull – the superior longitudinal, lateral and cavernous sinuses–also at the base in the olfactory grooves and along the lesser wing of the sphenoid. These are regions where meningiomas are particularly likely to occur, and it is to be assumed that in this case the meningioma arose in the floor of the anterior fossa in one of these arachnoid-cell clusters. It was a meningioma en plaque, in this case principally extending into the bone itself.

DR. COGAN: Are these cells ever pigmented?

DR. RICHARDSON: No, they are not. The arachnoid melanophore is quite a different cell.

The local bony overgrowth associated with the presence of meningiomas is well exemplified here. It is generally thought now that the tumor tissue acts as a stimulus to osteoblastic activity, but does not actually lay down bone.

A PHYSICIAN: What is the mechanism for the exophthalmos?

DR. RICHARDSON: I think that the exophthalmos was mechanical in this case and was the result of the bony overgrowth.

DR. COGAN: I forgot to mention that paralysis of upward gaze occurs with these meningiomas and does not follow the pattern of a nerve lesion as it does with the more medially placed meningiomas; it is almost invariably a faulty upward gaze, irrespective of whether the eye is turned in or out, such as one would expect with a mechanical limitation rather than a neurologic lesion.

A PHYSICIAN: What is the prognosis in this case?

DR. RICHARDSON: The prognosis is reasonably good, so far as this tumor is slowly growing and much of it has already been removed. It was impossible to remove all the neoplastic tissue at the operation. One can anticipate that there will eventually be a recurrence, although it may not be for many years.

DR. FREDERICK H. VERHOEFF: If there had been a large tumor mass there, you would have seen it, would you not, Dr. Ballantine?

DR. BALLENTINE: Yes.

It should be noted that meningioma en plaque or any type of meningioma giving this widespread change in the sphenoid bone is rare indeed. In 1952, Castellano, Guidetti and Olivecrona reported on their experiences with this type of lesion. Of 608 intracranial meningiomas seen in the neurosurgical clinic headed by Professor Olivecrona, only 25 were of the "en plaque" variety. It was the conclusion of these authors that radical surgery was seldom, if ever, indicated.

DR. COGAN: Can you explain the intermittent nature of the headaches?

DR. RICHARDSON: Not with any success. One might assume that it has something to do with changes in circulation in the abnormal tissue; I do not think it is possible to give a clear explanation of it.

DR. HENRY F. ALLEN: I should like to ask Dr. Ballantine if the exophthalmos was relieved by the operation.

DR. BALLANTINE: Very markedly; if one had not been looking for it, it would not have been noticed when the patient came in two months post-operatively.

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MEDICAL DIRECTOR
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Duke R. Gaskins, M.D.

Duke R. Gaskins, M.D.
Medical Director

DRG:jj

Woman's Auxiliary

THE STUDENT NURSE LOAN FUND

Mrs. D. A. Polson
S.N.L.F. Committee Chairman,
Phoenix, Arizona

THE STUDENT Nurse Loan Fund continues to grow. Since 1950, 38 student nurses have taken advantage of our loans. The total amount of money involved is $11,275. Twenty of our loanees have graduated to date, and 12 of these nurses have repaid their loans in full. The remainder are repaying on a monthly basis. During the seven years of the loan fund operation, three students out of the total 38 dropped out of school to be married; one of these lives in San Anselmo, Calif., now and hopes to continue in nursing school at a later date.

Our nurses graduating in the fall of 1957, were as follows: Lydia Zuniga, R.N. and Myra Higging, R.N., from St. Joseph's School of Nursing; Sylvia Espinoza, R.N. and Frances Zappia, R.N., from St. Mary's School of Nursing. Both Lydia and Myra were regarded highly by the personnel in St. Joseph's nursing office. Lydia repaid her loan in full in November. When graduating from St. Mary's, Sylvia Espinoza received the Francis D. Alikonis memorial achievement plaque for the most outstanding performance as a student nurse in theory and practice. She was to have enlisted in the U. S. Navy Nurse Corps in January. Frances Zappia was mentioned as graduating with distinction. She plans to work part time at St. Mary's Hospital and also attend the University of Arizona's program for graduate nurses.

Three of our graduate nurses obtained degrees in post graduate work. Belen Alvidrez has a degree in nursing education; Elizabeth Vance a degree in public health; LaVerne Timeche also

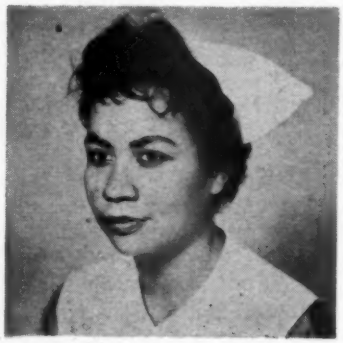
Enrolled at Good Samaritan School of Nursing: Coralee Caplan of Woodruff, Arizona (left) and Barbara Stahl of Glendale, Arizona.

has a degree in public health. LaVerne is working with Navajo Indians in the northern part of the state.

The pictures below show five freshmen who received scholarship loans from the women's auxiliary, enabling them to enter nursing school this past fall.

Two other students received additional scholarship loans from the auxiliary in September to assist them during their final 18 months in nursing school. Space will not permit pictures of these two. They are Charlene Hicks from Prescott, and Edna Niccum from Glendale. Both nurses are enrolled in Good Samaritan School of Nursing.

We wish these students success in their careers both during their time in nursing school, and later.



Enrolled at St. Mary's School of Nursing: Esther Alcaraz, Tucson, Arizona.

Enrolled in St. Joseph's School of Nursing: Sharon Johnson of Phoenix (left) and Amelia Saenz of Clifton, Arizona.

Book REVIEWS

METHODS OF GROUP PSYCHOTHERAPY
by **Raymond J. Corsini.** 251 pages. (1957) Blakiston-McGraw-Hill. $6.50.

An excellent survey skillfully directs readers through the maze of literature in this field. Historically sound, it is complete with an excellent bibliography and list of visual aids.

Stacey's Medical Books, San Francisco, California.

ANESTHESIA, A MANUAL FOR STUDENTS AND PHYSICIANS
by **Stuart C. Cullen,** M.D. 5th ed. 295 pages. Illustrated. (1957) Year Book. $5.50.

Revised and up to date, the newer concepts in anesthesiology are here, including a revised chapter on depressant drugs all presented succinctly with illustrations and bibliographies. It is intended for medical students, part time anesthetists, and general practitioners.

Stacey's Medical Books, San Francisco, California.

MODERN PERINATAL CARE
by **Leslie V. Dill,** M.D. 309 pages. (1957) Appleton-Century-Crofts. $6.50.

An associate clinical professor of obstetrics and gynecology, Georgetown, crystallizes modern thought on the care of women, antepartum and postpartum. The topics include: abortion, pelvic mensuration, the fourth stage of labor, and complications of pregnancy due to heart disease, diabetes mellitus, thyroid disorders, tuberculosis, and venereal diseases.

Stacey's Medical Books, San Francisco, California.

CHILD PSYCHIATRY
by **Leo Kanner,** M.D. 3rd ed. 777 pages. (1957) Thomas. $8.50.

This third edition of this landmark in child psychiatry has been completely revised and selectively pruned. The result will undoubtedly extend its life through another series of printings by preserving its prestige as one of the best all-around texts in the field.

Stacey's Medical Books, San Francisco, California.

THE HANGOVER
by **Benjamin Karpman,** M.D. 531 pages. Illustrated. (1957) Thomas. $9.50.

A clinical study of a common medical entity rarely discussed, presents analytically detailed cases. Experts may be interested, but the presentation is too complicated and impractical for the average practitioner.

Stacey's Medical Books, San Francisco, California.

ORTHOPEDICS FOR THE GENERAL PRACTITIONER
by **William E. Kenney,** M.D., and **Carrol B. Larson,** M.D. 413 pages. Illustrated. (1957) Mosby. $11.50.

Common problems and their management are illustrated. Reference to them is easy. Separate chapters consider each anatomical region, childhood orthopedic disorders, bone infections, arthritis, bone tumors, and unusual diseases of the bone. Notes on management are specific. The bibliography is abbreviated but the index is good.

Stacey's Medical Books, San Francisco, California.

CYTOLOGIC TECHNICS FOR OFFICE AND CLINIC
by **H. E. Neiburgs,** M.D. 233 pages. Illustrated. (1957) Grune & Stratton. $7.75.

An expert in cancer from New York, develops a test for the Papanicolaou technique for the examination of slides made from swabs to detect cancer in the early stages. The use of these techniques, now extended far beyond gynecology, is probably dubious practice for the office, but a knowledge of the scope, specimens needed, and machinery behind the report is well worth a little time.

Stacey's Medical Books, San Francisco, California.

CLINICAL GASTROENTEROLOGY
by **Eddy D. Palmer,** M.D. 630 pages. Illustrated. (1957) Hoeber-Harper. $18.50.

Each chapter considers an organ and its diseases in terms of clinical manifestations, etiology, pathology, diagnostic tests, therapy, and prognosis. New tests, techniques, and treatments are stressed. The author, a lieutenant colonel, Medical Corps, United States Army, writes from the standpoint of office and bedside medicine.

Stacey's Medical Books, San Francisco, California.

PSYCHOPATHIC PERSONALITIES
by **Harold Palmer,** M.D. 179 pages. (1957) Philosophical Library. $4.75.

The author, a British psychiatrist, presents a sort of textbook of psychiatry under a title misleading to Americans. "Psychopathic" to him means mentally ill without reference to aberrations in character. He covers the standard conditions in a standard way.

Stacey's Medical Books, San Francisco, California.

THERAPEUTIC EXERCISE: For Body Alignment and Function
by **Marian Williams** and **Catherine Worthingham.** 127 pages. Illustrated. (1957) Saunders. $3.50.

Corrective procedures best suited to clinical application are discussed in terms of basic functional anatomy. The text is concerned with selection and analysis rather than with the introduction of new techniques.

Stacey's Medical Books, San Francisco, California.

1956-57 YEAR BOOK OF CANCER
by **Randolph L. Clark, Jr.** M.D., and **Russell W. Cumley.** 572 pages. Illustrated. (1957) Year Book. $7.50.

With outstanding editorial supervision, abstracts of current leading articles in the world literature cover all phases of research and clinical management. The detailed abstracts have the usual compactness and careful indexing that distinguishes all Year Books.

Stacey's Medical Books, San Francisco, California.

FLUID BALANCE IN SURGICAL PRACTICE
by **L. P. LeQuesne,** F.R.C.S. 2nd ed. 140 pages. Illustrated. (1957) Year Book. $3.75.

Fluid and electrolyte management in surgery is concisely discussed, both as to theory and as to clinical applications. Case illustrations, bibliography, and index are all included.

Stacey's Medical Books, San Francisco, California.